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This process is well illustrated in the case of psychology. The main outlines of Freud's methods, and the more general and simple of his conclusions, have met with a wonderfully ready acceptance from a large section of the intelligent medical and lay public. One no longer hears the phrase "the new psychology." It has become the ordinary, and, indeed, the only, psychology.

What the modern young person does not know about complexes, projection, sublimation, and all the rest of it seems hardly worth knowing. And why not? It is always something to have the glad tidings accepted at all, and one cannot fairly complain if a convert's enthusiasm occasionally outruns his understanding. In any case it is rather beside the point, because if we are to come to any conclusions about the application of psychology to medicine we must consider the process as it is carried out by the acknowledged psychological experts. To do otherwise would be less than fair.

What scientific psychology has to offer to medicine is the psycho-analytic method of investigation and treatment. I say "investigation and treatment" because, as you all know, the two are inseparable. The investigation is the treatment and the treatment is the investigation. So inseparable are they that, as Dr. Ernest Jones and others have pointed out with proper pride, diagnosis very often comes after treatment and not before it. Though there are those who would object to this state of affairs, I for one have no complaint to make of it. I view it simply as one of those "necessities of the case" which William James, in his innocence, regarded as calling for the services of a metaphysicist. Psycho-analysis must make her contribution to medicine in her own way. She has also the undoubted right to say who shall or shall not preach her gospel, or, at least, to decide what qualifications her missionaries require. She seems to me to be disappointingly reserved in her account of what manner of man her champion must be, but that is her own affair. I suppose that one should not even criticise her requirements, but I have ventured to make a few comments on her list. It is a short list, but after a reasonably careful search I can find nothing to add to it.

THE EQUIPMENT OF THE ANALYST.

Firstly, then, the medical psychologist must undergo "a laborious special training, demanding at least three years incessant practice." I presume that he obtains the special training from books. As regards the three years incessant practice, it is not quite clear where he obtains his material—perhaps from among the deserving poor. In any case the rule seems an admirable one, and I should be glad to see it come into force.

Secondly, he must possess, before beginning this training and practice, "a good knowledge of neurology." The precise reason for this particular stipulation eludes me at the moment, but one can commend it heartily on general principles. At the least it is a graceful courtesy towards the art of medicine. It is indeed the one and only concession which the psychologist is specifically asked to make to the vast subject which he is approaching, and as such it has every claim to honourable mention.

Thirdly, the medical psychologist must himself have been analysed. This, although it is by no means universally observed, seems an eminently reasonable condition to make. It is one more of those "necessities of the case" which keep cropping up. Not being a metaphysicist, I must refrain from dealing with the delightfully interesting questions which it raises. I shall not even propound them. Personally I am entirely in agreement with the poet who says, referring to psycho-analysis, "Only those who brave its dangers comprehend its mystery." It is true that the poet is ostensibly referring to the sea, but, as we all know, the sea is a universal symbol of the unconscious, and his real meaning is thus quite clear.

Finally, the psychologist must have certain personal qualities of which patience, unimpeachable integrity, tact, and sympathetic understanding are those officially recommended. Such qualities are obviously ornaments to any man, though I confess that I had never regarded the two latter ones as being essential

to, or characteristic of, a devotee of pure science. I learn from Dr. Ernest Jones that without these qualifications the psychologist may fail to "gain the patient's confidence to the requisite degree." But this will never do. If there is one thing with which a scientific method has no concern it is surely the gaining of people's confidence by one's personal qualities. That is work for an unscientific and inferior order of beings.

In the very paper from which I have just quoted, and almost on the same page, we read: "In *suggestion* treatment the physician adds something to the patient's mind—confidence, belief, &c. The psycho-analytic method does not add. It is in almost every respect the reverse of treatment by suggestion." I cannot reconcile these two quotations. It looks very much like more work for our metaphysicist. Perhaps I should say, in parenthesis, that if anyone cares to object that I am quoting from a very old paper, I reply that I freely admit it, and that I hope to tell you why before I have finished.

However, if the psychologist really desires the graces of tact and sympathetic understanding it is not for others to suggest that he may put them to such base uses as that of gaining a patient's confidence. Let us rather rejoice that he adds these virtues to his unimpeachable integrity and his good knowledge of neurology, and let us consider how this "verray parfit gentil knight" will fare in his great adventure of applying psychology to medicine. Our knight-errant's venture, I am sorry to say, is a failure. It is rather a splendid failure, because he kills any number of dragons, he does little or nothing that is actively harmful, and he does a great deal that is helpful and wise and good. But he fails for all that.

Psychology and "Objectivity."

There are various points of view from which the comparative failure of analytical psychotherapy can be discussed. The first one, which is staring us in the face, is the question of the attitude of the psycho-therapist to the patient he is about to treat. Scientific psychology has not the slightest hesitation in defining that attitude. The goal to aim at, we learn, is complete objectivity on both sides. This is admittedly difficult for weaker brethren, and it did not greatly surprise me to learn from Dr. Glover that "every psycho-therapist at one time or another is aware of a tendency to backsliding." The two commonest wanderings from the straight and narrow path of objectivity are, apparently, "flirtation with endocrinology," and "an impulse to give the benefit of the doubt to organic factors in illness." These are indeed regrettable lapses. I can only say of the first that boys will be boys, and of the second that it looks as if the good knowledge of neurology were already proving a double-edged weapon. What happens, by the way, to the tact and sympathetic understanding I cannot tell you. I presume that they fly out of the window as objectivity enters the door.

The purely objective attitude is, of course, the only right and proper one for a scientific inquiry. It is the ideal way to approach, say, a fossil, or—to be strictly accurate—for two fossils to approach each other. As between two human beings, ill or well, I should have thought that its utter impossibility would have been obvious to anyone with the very slightest experience either of medicine or of real life. But the psychologist cannot alter his attitude when he comes up against real life. To do so would be to destroy an admirably sound scientific edifice. If the facts of life will not fit in, so much the worse for them. And so it happens that his position sometimes comes to resemble that of the research physiologist whose experiments so often work perfectly in a test-tube and fail completely in the human body.

But we are in a stronger position than the physiologist. He cannot say, with any hope of being generally believed, that the human body is the same thing as a test-tube, but we can, and do, talk about "the series of events in space-time that constitute the living self." Many people will accept this statement without pausing to inquire what, if anything, it means. A few will realise how it recalls the delicious and polysyllabic fragrance of Herbert Spencer, and hardly any will have the courage to tell us that as a way of looking at medicine or life it is an academic and old-fashioned absurdity. But it certainly helps to justify the attempt at objectivity, which is always something.

Now there is a certain proportion of medicine and of life which comes into the field of vision even of a man who thinks that to study life is to look with complete objectivity at "a series of events." With this amenable proportion the psychologist deals admirably well up to his limits. With the much greater proportion which he misses he deals in a way which is hardly so creditable. He ignores it, as far as he possibly can, and when to ignore it becomes impossible then he misinterprets it or explains it away. The attitude of objectivity thus seems to get us into difficulties from the outset, and I must refer to some that arise from it before proceeding to other aspects of our subject. They can be summarised easily enough. Psychology is a science, medicine is an art. It follows that when psychology has given all she has to give it is only the purely scientific aspect of medicine that can possibly benefit. And in every medical operation, down to the simplest piece of therapy, there is an inevitable mixture of science and art. There is a scientific basis, there is a scientific technique, and there is—or ought to be—an element which, because it is art, defies analysis, but without which results are apt to be commonplace and incomplete.

I need not tell you that psycho-analysis does not accept this view. It cannot see any necessary difference between the attitude of a physician to his patient and that of a psychologist to his problem. It will never admit that there can be any element in any human relationship which is incapable of being scientifically analysed and explained.

Psychology and "Suggestion."

Well, of course, there is, as we all know—psychologists included—and it is here that trouble begins. The psychologist finds before he has really tackled half a dozen patients that by far the most vital and potent factor in his relation with them, and his treatment of them, is something about which his psychology is silent and with which even his good knowledge of neurology does not seem to help him. Let me digress here for one moment to beg you not to misunderstand me on the question of scientific medicine. For unscientific medicine I have a hearty contempt and I have an even greater one for the unholy brood of so-called "pseudo-sciences" which cluster round it. There is nothing worthy in medicine which is unscientific, but there is a very great deal in medicine which transcends science, and which science cannot as yet explain or apprehend. Particularly is this true in psychological medicine, and, as we were saying, this is a fact which modern psychology cannot and will not grasp.

When I said a moment ago that she was silent on the subject, I was speaking something less than the truth. She is, of course, very far from silent. She forgets that there is nothing unscientific in being unable to explain a fact, and that indeed, the primary business of science is not to explain facts, but to admit and observe them. She puts every single fact in this connexion that she cannot fully explain into one enormous heap—a rubbish heap—and on the top of the heap she plants a banner with the strange device "suggestion."

The thing now proceeds on lines which psycho-analysis has itself made only too familiar to us all. The fact that something exists which we don't understand is, of course, intolerable, and the usual mechanisms come into play. A comprehensive explanation of "suggestion" is evolved, which gives the psychologist the most ample grounds for erecting beside his banner the red flag of "danger." Concerning this explanation—do you mind if I call it by its

technical name and say "this rationalisation?"—I have only to say without hesitation and with every hope of violent contradiction that it is probably the most sadly inadequate performance of which any science has ever been guilty.

But the matter does not end here. Though the psychologist has now a respectable "reason" for disliking "suggestion," yet he goes erring after it time and again, partly because he wants to, and partly because he cannot help it: it is a necessity of the case—of every case. This sad but familiar state of affairs may, I think, legitimately be termed a conflict. Officially—or consciously—the psychologist shuns "suggestion" like the plague. Unofficially—or unconsciously—he coquettes with it daily. Need I tell you the inevitable result? I don't mean minor results such as the lapsus calami which I quoted to you, but the main psychological result. It is simply the mechanism of an obsessive fear writ large. Psycho-analysis and its disciples are suffering from a psychoneurosis—a compulsion neurosis. The word "suggestion" is to them precisely what a red rag is to a bull—and for many parallel reasons.

Although I have dealt with this at some little length—the treating of people, however inadequately, with their own medicine being always attractive—it is really only the approach to a number of more important and practical questions which arise when we come to consider the actual treatment of patients by the psycho-analytic method. We have to deal with people who are sick in a particular way: people who may be described generally as suffering from mental disharmony of some kind or other. Our problem is a thoroughly practical and clinical one—what has scientific psychology to say to the victim of mental disharmony?

The Aims of Analytical Therapy.

It tells him first of all that with his coöperation it can disentangle and lay bare the very roots of conduct, that it can make him realise the sources from which his thoughts arise and the machinery by which he thinks. Such a realisation, it continues, will dissolve away the inhibitions, the make-believes, and the insincerities which cloud thought and hamper conduct, and he will become a man who sees himself as others see him, or even more clearly, and who sees life steadily and whole. Finally, and best of all, the psychoneurotic symptoms which were the result and the proof of mental disharmony will disappear as mental harmony is restored. That is the essence of psychology's contribution to medicine; that is its message to the sick man. The message is, in the main, perfectly true, and yet, as I have said, it is a failure, regarded as a contribution to medicine. It is a failure, not because it is inaccurate, but because it is inadequate.

Let me remind you that for the purposes of this discussion I am freely granting the general soundness of the main body of psycho-analytical therapy, as well as its efficacy within its own limits and its freedom from harmful effect upon patients. You are aware that on all three grounds it has been fiercely attacked, and many of you would agree that some shrewd blows have been dealt it along these lines. But my quarrel with it is of a different nature, and as far as the above points are concerned I am quite prepared—without prejudice—to take it at its own valuation for the present. Besides, I very largely agree with that valuation. I believe that in a majority of cases psycho-analysis is more likely than any other method permanently to remove a given psychoneurotic symptom.

But we shall all be agreed that that is but a poor compliment. The mere removal of symptoms is a small matter—do not even the suggestionists the same? Analytical therapy's self-imposed task and method is the disentangling and rearranging of the whole mental life of the patient, so that psychoneurotic symptoms become an impossibility. Neither is there salvation from neurosis in any other method. The whole thing is admirably logical and scientific. It is like an infinitely skilled workman dealing with some intricate and delicate machinery which has gone wrong.

There is bound to be an ascertainable and remediable cause for the irregular functioning so long as the laws of matter and motion remain. Yes, here it is; the friction is eased, or the foreign body removed, the parts are reassembled, and off we go again. Unfortunately, human beings are not constructed on the lines of a motor-car, or an eight-day clock, and they are just as incapable of completely scientific psychological analysis as they are of purely objective psychological approach.

Theory and Practice.

What exactly do we find when we begin to dissect the mind of John Smith? We find, for one thing, that he is a mass of ideas, prejudices, reactions, and beliefs, many of which are utterly irrational and are constructed on similar lines to psychoneurotic symptoms, differing from them, I suppose, only in degree, if at all. In any case, he certainly cannot be analysed and save these things intact. Down must come the entire structure. It was a queer shape, anyhow. True, it made up what he called his personality, but we can't help that. One must break eggs to have an omelette. And then—though we are debarred from giving him advice or assistance in the task—he can always re-educate himself to a more practical sort of personality, just as the omelette re-educates itself into a square egg. I know of but one recorded instance of this double metamorphosis being attempted with an egg—namely, the classical case of Humpty Dumpty. In that case the re-education was a failure, even with military help, but possibly John Smith may be more fortunate.

Let us take down this absurd looking old cabinet. I have borrowed it from another writer for the purpose. It is composed of hundreds of pieces of various woods, many of them very valuable, but its shape is wrong, the drawers work badly, and the mosaic pattern of the inlay has not been symmetrically arranged. As we proceed even graver faults in construction become apparent. The stresses and strains are all improperly distributed. Here is a stout cross-piece bearing nothing, and there is a lid which is only supported at all because two uprights have fallen out of place and are holding a weight for which they were never intended. However, we shall soon ease that. There is the whole thing on the floor at last. *Requiescat in pace*—or to be literally accurate—*in pacibus*.

Now for the reassembling. Strictly speaking, the new design ought to be specified by the cabinet itself and not by us—it should be a self-governing cabinet—but I waive that point. In a very short time we shall be only too thankful to put the thing together to any design at all. And at the end we shall be left, like the boy who analysed his watch, with half a dozen pieces that don't seem to fit in anywhere, but the cabinet somehow is not the same without them.

Is everything a neurotic symptom which is constructed as such symptoms are? Is everything which crumbles during an analysis a neurotic symptom? Is every irrational reaction or idea or belief a neurotic symptom? If so, what exactly *is* a neurotic symptom? If not, is it good that these things should be dissolved away, and is the analysed or unanalysed state the more healthy?

Be these things as they may, it is very certain that, apart from any "symptoms" he may show, John Smith's life is largely composed of irrationalities, which to him and for him are real and practical truth, and upon which his efficiency and health depend. All the logic is on our side, but the man is incorrigible. We put him right on the facts of life before birth in which he ought to believe but does not; we put him right on the legend of life after death, in which he ought not to believe, but does, and he might at least, one would imagine, live and think according to our logic between the cradle and the grave. But will he? By no means. We tell him,

for instance, all about the dangers and terrors of authority, we instruct him regarding infantile attitudes and reactions, and we preach the gospel of psychological independence. And all of it is true enough in its way. But John Smith is horribly practical. He knows all about authority—he was once an office-boy. He believes, with Johnson, that "no two people can be half an hour together, but one shall acquire an evident superiority over the other." His common sense tells him that personality needs a soil in which to flourish and a background against which to be displayed, and that unless the world is to be peopled exclusively by Mussolinis authority will be a reality in every department of human life till the end of the chapter. At least it is a reality, and a gladly accepted one, to him. The same is true of many more of his irrational components. They are the left-over pieces. We have proved that he can be reconstructed—after a fashion—without them, but they were real and essential to him, and he knows how to make use of them. They were his—and will we please give them back.

Psychology and Belief.

I want to go just a step further in this connexion before passing on, and to look for a moment at the objects, rather than the mechanisms, of irrational belief. To begin with, we all know that facts are of different orders and natures, and that in any study of facts by scientific method the scientist must begin by defining the nature of the phenomena with which he is going to deal. The phenomena with which the psychologist deals are conveniently grouped as mental. All the activities of mind and their outcome in behaviour are his province, and it is in connexion with those phenomena, and those only, that he should observe his facts, collect his data, and formulate and test his hypotheses. A patient has, let us say, various convictions and beliefs. These beliefs are psychological phenomena which should be carefully studied as such. That is to say, we can show the patient how his belief arose, whether his mental processes were as logical as he perhaps imagines, how he has rationalised, where he has been swayed by emotion, and so forth. We can, in short, expose and explain the entire machinery by which the belief has been produced, and the mental bases on which that machinery rests. What we cannot do, or rather, what we should not do, is to offer any opinion as to the truth or falsity of the thing believed.

When you have said all you have to say about my conviction that nine sevens are 63, and I then say: "Thank you, but as a matter of fact *are* nine sevens 63?" you have only one proper course—namely, to direct me to the nearest mathematician. The debate is now upon a mathematical question, not a psychological one, and has passed out of your domain into his. To that illustration, which, by the way, is borrowed, there is the reply that in it the mental processes are logical and the conclusion demonstrably sound. But neither fact makes the slightest difference to the principle. The principle still holds if I say, for instance, that my school was the best one, or that my university was the most modern one, or that my system of psychology is the only scientific one. If I tell you these things you may very properly draw certain inferences about me and my mental processes, but you have no business, as psychologists, to deny or dispute my conclusions. I may conceivably be right.

It is surely obvious that our concern should be only with the means by which a belief or opinion was reached. However faulty, insufficient, or absurd these means may have been has no bearing whatever upon the objective reality of the thing believed. That is a question for the appropriate department of knowledge: history, or mathematics, or astronomy, or perhaps the universal testimony of human experience. To all this you may reply that I am needlessly elaborating an elementary point, and discussing an error into which no good psychologist would fall. But failure to look carefully at the elementary points and to discuss them fully has been responsible for more misunderstanding than anything else in psychology. That, by the way, is my justification for lecturing on first principles to an audience of experts. The besetting sin of every medical psychologist is that he insists on running before he has learned to walk. He does more than run, he skates, and it is sometimes over very thin ice. As regards the frequency of this particular error I will only say that when we find, as we so often do, that something in which a patient believes is an externalisation of what he wants to believe, and that his conviction of it is produced by the familiar irrational mechanisms, then we are almost irresistibly tempted to deny to the thing believed the possibility of an independent objective existence.

We yield every day to the temptation to pass judgment on matters with which our psychology has nothing to do, and to confuse the mechanism of belief with the object of belief. A mental conception—a phantasy, if you like—can perfectly well have an independent objective counterpart as well. After all, many objective realities began as psychological ones, if you come to think of it. Although I may apprehend a reality in a round-about and fallacious way, it may exist none the less. It is very possible that in the first instance I believe something to be true because I ardently desire it to be true, and because it would meet my psychological needs if it were true. But does that necessarily make it false or non-existent? It is possible, you know, that realities exist which are suited to our psychological needs, and if it is a question of the fundamental psychological needs of every man and every age, then I think the possibility becomes a probability.

Phantasy and Reality.

Things may exist even though we hope for them. Occasionally, even in real life, a story may have a happy ending. There was once, for example, a small barefoot boy who, stimulated by the effects of stones, nettles, and broken glass, told his companions a silly little childish phantasy of some wondrous place where the floors were of smooth rubber, where neither nettle nor glass might enter, and where there should be no more gravel. And in this strange heaven, said he, there lived one who knew about feet and who cared for them, and who would give to his feet and to those of all who came there a wonderful covering, a protection from pain and cold and wet, a foot-joy such as it had not entered into the sole to conceive. And his companions who were psychologists in the making but were not yet perfected in the tact and sympathetic understanding so necessary to their profession, laughed at him. And the boy cried himself to sleep. And in the morning his father took him to a bootmaker's shop. And there he found not only boots beyond his imagining, but, strangely enough, a pair that fitted his feet and might have been made for them alone, as it were from the foundation of the world.

Nobody considers it impossible, or even remarkable, that things should exist which satisfy our bodily needs. Did you ever think of that marvellous and illogical character, the man who, craving for carbohydrates, found and ate the first potato? What a venture of faith! Almost anything might have happened. What did happen was that when he got home his wife, who was a psychologist but had only a fair knowledge of neurology and none of physiology, explained to him that the potato did not really exist, and that if it had existed it would probably have poisoned him. And the man said that he wished it had. The friends of Christopher Columbus told him that America was simply his phantasy, an externalisation of himself which had no objective existence outside his mind. When they found they were wrong they were much disappointed. Some people are a little disappointed still, but the fact remains that America was not an invention; it was a discovery.

We may note, by the way, that a similar kind of error tends to creep into our dealing with symbols.

This has often been pointed out before, and I do not propose to discuss it at length. All I have to say about it at the moment is conveyed by the story—which deserves to be better known—of the precocious little school-girl who laughed and giggled in the class when the teacher announced a lecture on wading birds, of which the first was the stork. When asked to explain her mirth, she replied with a knowing smile: "Oh, but teacher . . . the idea of there really being any storks!"

Father's mashie was several different things at the children's charades last night. It was an oar, and a putter, and a sceptre, and a fishing-rod. Nevertheless it retains an independent existence as a mashie in its own right, and is, in fact, the actual weapon with which father hacked his way to victory at the seventeenth hole on Sunday, though I admit you would never have thought so to look at the charade, or at the mashie, or, for that matter, at father. But this is rather a digression. If I am not becoming wearisome to you, I should like to consider one more aspect—perhaps the chief and central one—of the inadequacy of the psycho-analytic method of treatment.

The Inadequacy of Analysis.

Let us return for a moment to our rough analogy of the wooden mosaic cabinet. I do not wish to push it too far, but I may point out that something has eluded us in our analysis of it. The most important thing of all has eluded us—namely, the glue. We can testify to the strength with which it resisted our separation of the pieces, and to the fact that it looks as if it were all there still—but it will not stick the pieces together again. It has ceased to be adhesive. It will never be adhesive any more unless we add something to it, and, as we have learned, "the psycho-analytic method does not add"

Analytical psychotherapy shuts its eyes, of necessity, to many of the greatest and most powerful realities in human life. I say of necessity not only because it works, so to speak, on but one plane and by but one method, but also because it will not admit any realities in mental activity and experience unless they exist upon its plane, are amenable to its method, and can be expressed in its terms. Alone among the sciences it claims a universal applicability, and alone among the sciences it is never at loss. Its discoveries and truths are wonderful and helpful and fascinating, but when seen against the background of its own demanding—namely, the everyday life and health of men and women—they cannot help appearing what Mr. Alfred Noyes in some very striking verses calls "little truths." In a certain immortal allegory we read of a man who could look no way but downward, with a muckrake in his hand; a man who would neither look up nor regard, but raked to himself the straws, the small sticks, and the dust of the floor.

Now the usual uninformed and foolish criticisms of psycho-analysis are directed against the muckrake and the sweepings, with which I, personally, can see nothing amiss. The man seems to me to have done the most that could be demanded from anyone in his position. He used suitable apparatus, collected just what one would expect with it, and I have no doubt he left the floor a better place than he found it. Both his position and his implement made window-cleaning impossible. The limited nature of his activities was the direct consequence of his attitude, and it is his attitude to which I object. Such an attitude is bound, as I have been trying to show, to lead to misapprehensions, unwarranted assumptions, and incomplete results. But the greatest tragedy of it is the amount that eludes it altogether. The man does not realise the tragedy, because it never occurs to him to question his attitude, to expand his methods, or to admit his limitations. "I cannot see a sky," he says, "and my rake has never brought it along the floor to me. Therefore there is no sky, and that is the end of it." I fear that this attitude is a necessity of the case, both in the analyst and the analysed.

If, as I imagine, nobody has yet made a post-mortem psycho-analysis of Swinburne, in the approved manner, I beg to propose him as the next victim. Alternatively, if sciences have patron saints, I should put him forward for that office. I know of no one whose outlook shows so clearly both the strength and the weakness of the psycho-analytic position. In particular he possesses in almost unique degree the ability to make a desert and call it peace.

> "Though one were strong as seven
> Yet he with death shall dwell
> Nor wake with wings in heaven
> Nor weep with pains in hell."

The good cheer with which he enunciates this demonstrable truth is in quite the best tradition. And then, of course, we have the well-known lines:—

> "From too much love of living,
> From hope and fear set free
> We thank, with brief thanksgiving,
> Whatever gods may be,
> That no life lives for ever,
> That dead men rise up never,"

and so forth. Could the position possibly be better expressed? Note in particular the psychological independence achieved in the first two lines, the brevity of the transference phenomena, and the scientific caution of line four, merging into well-warranted confidence in the simple dogma which follows. Surely this is the sincere milk of the psycho-analytic word.

By way of contrast I should like to introduce to you the outlook of a very different, and, as I think, a more all-round character, whose creator, appropriately enough, is Mr. G. K. Chesterton. He is a knight, who rides "forever seeking after God," or, as we should put it, he is more interested in looking through the window than in cleaning up the floor. The fact that he may not be able fully to analyse or explain what he may see does not trouble him. He will experience it, and the experience will be none the less valid and real. But will he ever see anything? That I cannot tell you—not at present, anyhow. Shakespeare—or Hamlet—thought so, and the possibility is hinted at in an old-fashioned psychological handbook. And I think we must leave it at that. Besides, it is not the important point. We are not concerned with what he may or may not see. What really matters is that he has adopted an attitude and outlook from which vision is at least possible, and that the attitude makes for completeness and sanity and health, and is indeed essential for them. He is rather a fine fellow, this knight, though I fear that his sublimations and transferences need some attention, because there is in his eyes, he says . . .

> . . . . "the star of an unconquerable praise,
> For in my soul one hope for ever sings
> That at the next white corner of a road
> My eyes may look on Him."

Well, of course, if the man is going to talk that way we can't compete. It would be like inquiring the distance from roast beef to the square root of minus two. Our own familiar jargon, lying on the floor beside that rake, at least sounds as if it meant something, but when it comes to souls, and hope singing, then we give in. Unfortunately, we don't give in, as I have just pointed out, but let that pass. This knight of Chesterton's is at least a man, to whom life is a great adventure, surrounded with wondrous and mysterious possibilities, and is not a disgruntled machine to which life is a matter of complete indifference. Breathes there the man with—mind so analysed, that he doubts which is the happier and healthier and saner outlook?

Symbolic and Intimate Knowledge.

If psycho-analysis recognised any psychology but its own, I do not think it would be really difficult to clear up this matter of the truths which elude the analytic method. Is it not, in essence, a question of the two varieties of truths, about which William

James has so much to say: the "innate" or "a priori" truths, as he calls them, of the sciences, and the utterly different "truths of experience" or, if you prefer to go back to Locke, "mental" truth and "real" truth?

In Dr. Eddington's wonderful book "The Nature of the Physical World" there is a chapter on Science and Mysticism in which he discusses the same question, using the terms Symbolic knowledge and Intimate knowledge. "Intimate knowledge," he points out, "will not submit to analysis; or, rather, when we attempt to analyse it the intimacy is lost and it is replaced by symbolism." In that one sentence the necessary inadequacy of psycho-analysis is unanswerably set forth. If only this were admitted, how the value of its great work would be enhanced. Dr. Eddington gives a wonderfully happy illustration. He supposes, he says, that humour and wit can be analysed. Well, we can all assure him that he is quite right there. He then points out that after a sample of humour has been duly analysed and passed as a joke, the next thing to do is to laugh. "But it may certainly be predicted," he says, "that as the result of this scrutiny we shall have lost all inclination we may ever have had to laugh at it. It simply does not do to expose the inner workings of a joke. The classification concerns a symbolic knowledge of humour which preserves all the characteristics of a joke except its laughableness." And that is why psycho-analysis, though not of Scottish ancestry, misses the point of every joke it touches.

Now there are very large departments of life where intimate knowledge flourishes and symbolic knowledge is at a discount. It is when it insists on tackling these that the psycho-analytic method is specially apt to make itself look ridiculous. It becomes hopelessly confused, for example, between the symbolic knowledge which is theology, and the intimate knowledge which is religious experience. We cannot now discuss this great subject, but I may take a final illustration from it.

A great many years ago a company of working scientists made a singularly complete reductive analysis of Jesus of Nazareth. I do not suppose that as they carefully divided his clothing they imagined it possible that anything had eluded or escaped them. But something did escape them; something which for 2000 years has done more than any other single factor to influence individual characters and national destinies. I am not now concerned with the nature or the value of this something, but with its reality and potency. I merely state a fact which, if any sane person doubts, he can confirm by reading half a dozen biographies or a history book. Modern psychology, however, has but one method to apply to this unique phenomenon. Armed with our sword of science, and strong in our unimpeachable integrity and, of course, our good knowledge of neurology, we march forth to apply our instruments of precision to what is probably the greatest truth of experience. We go one better than our Roman predecessors, for we tear into futile strips not the garments nor the body, but the character and mind of that supreme personality, and we say "behold the man." We, too, are certain that nothing has eluded us, because—nouveaux riches that we are—we have not learned and will not learn that there are aspects and regions of reality which scientific method can never apprehend.

Psychology and Real Life.

And now what does it all amount to from the point of view of medicine? Simply this, that apart from any other considerations a method which is not in contact with the vital realities of which life is so largely composed and upon which health of mind so greatly depends, is bound to be inadequate as a means of treatment. The hardest and the truest thing one can say about psycho-analysis is that it is divorced from the everyday life of ordinary men. The very system that talks so much about individual psychology is, by a strange paradox, the very system that manufactures endless psychological generalities and turns them out with machine-made uniformity and mathematical precision. Even its deepest researches and truest discoveries have little practical and helpful relation to the life of experience. As far as John Smith is concerned, the Ego, the Super-ego, and the Id have just about as much to do with his life as the three-card trick has to do with the Derby.

John Smith does not want a system that explains everything; he feels that it would cramp his cosmos and make him think that there was nothing worth explaining. He is not thrilled by the prospect of saying "I understand and I am not afraid." He thinks that it is equally fine, and much more likely to be true, to say "I do not understand and I am not afraid." He has no objection to a poet telling him that hope is singing in his soul, though he wouldn't have put it that way himself, and he is quite prepared to add faith and charity to the orchestra. Another poet has referred to this irrational trio as "the music of the dream that never dies," but those to whom the journey from floor to window presents insuperable difficulties find it simpler to call them "transference phenomena."

I would point out, in conclusion, that in the present trend of psycho-analytical writings we find very striking examples and results of its detachment from practical life, and therefore from practical medicine. The writers seem to turn away from the clinical side of the subject as if aware of its incompleteness and sensing its pitfalls, to wander in the happy hunting-grounds of scientific speculation and research. The actual illness of the patient is sometimes referred to in a way which leaves the impression that the writer's main concern is to get busy with a description of what he has learned from the case, or an account of the principles which it illustrates. These are perfectly legitimate topics, and I quite agree that if a writer's medical equipment happens to consist solely of a good knowledge of neurology, one must be prepared to make allowances, but the high proportion of this kind of work is an interesting and significant fact nevertheless.

I said I would tell you why I quoted from an old paper. It was for the good reason that nowadays papers on practical medical psycho-analysis are almost impossible to find. I thought I had found one a few weeks ago, but as I read on it became clear that the author had not so much as seen the patients whose reactions he was describing.

Not long ago I heard two brilliant papers read during a discussion on a strictly clinical subject, but so far removed were they from the matter under consideration that when they came to be published their very titles had to be changed. While I would not go so far as to compare our psychological knight-errant with Sir Andrew Aguecheek who was dubbed, if you remember, with unhatched rapier and on carpet consideration, although a devil in private brawl, yet I do suspect him of spending more of his time over his well-known text-book on "The Principles of Dragon Hunting" than in single combat with individual dragons. This is by no means to his discredit. It is the last and final necessity of the case. He has been more than useful as it is; he has been essential. His fault is simply that he cannot realise his incompleteness, or admit so much as the possibility of coöperation with some one, let us say, like St. George, who, with all his faults, has been trying to slay dragons in a practical if empirical way for quite a long time.

You will please remember very specially that in what I have just been saying, and in the little I have yet to say, I am particularly referring to Freudian psycho-analysis—the true, original, and—as I think—self-limited method. Otherwise, it would, of course, be an overstatement to say that psychology, even in its present state, had but little practical and helpful relation to everyday life and experience. But those who do most to increase the intimacy of that relation are those whom Freudians disown.

It is as satisfactory as it is inevitable that psycho-analysis is becoming ever less prominent as a means

of therapy, and ever more effective and far-reaching and profound as a system of psychology. But if it were never applied to another patient clinical medicine still owes it a debt which it would be hard to overestimate. We need not discuss the reasons why the acknowledgment of that debt has been perhaps somewhat lacking in readiness and cordiality. It is possible that there may be faults on both sides. I should be sorry to leave the impression that I, for one, did not feel the debt keenly and acknowledge it frankly, and I trust that any apparent flippancies in my remarks have not exceeded the amount which is not merely allowable, but needful, if an address of this unconscionable length is to be tolerable at all. As for my more serious criticisms, psycho-analysis is only too well able to look after itself, and, in any case, I respect it too much to be insincere.

Psychology and Mysticism.

Until psycho-analysis can acknowledge and overcome its limitations, it cannot be what it claims to be: a complete, self-contained, effective, independent contribution to—indeed, a synonym and substitute for—the great art of psychological medicine.

Psychology is not an art; it is only the hope of an art. It is waiting for a greater than Freud—not necessarily a greater genius, but certainly a greater—because a more complete—man. When he arises, the necessities of the case will make him what we should now call something of a mystic, because his great work will be to connect scientific truth in some unimagined way with those great realities of experience apart from which mental life is a mechanical rattle, and mental health an impossibility. He will relate the machinery of mind, as never before, to every fact of life and of experience. It may seem a hard thing to say of him, but I expect he will believe in God. Otherwise I cannot conceive how he will succeed in reaching across the gulf between science and mysticism, between symbol and reality. One can hardly imagine that that gulf may ever be bridged and the road run clear from knowledge of mind to understanding of life and of the mysteries that lie in and around and beyond it. But should it conceivably happen, then science will have achieved her supreme triumph, and one need set no limits to its possible results.

One cannot readily picture the lines along which this great scientist will work nor the discoveries he will make. We can be sure, however, that he will not be false to science as we know it, though he will so enlarge its vision and scope that it will become a means of apprehending truths at which now we can only guess. When I think about this new and great scientist, I like to remember that new truths sometimes have a way of turning out to be simply old ones, expressed from a different viewpoint and in words more suited to the time. Remembering this, I sometimes wonder whether the wheel might conceivably come full circle after all, and whether science's last and greatest discovery might possibly—just possibly—prove to be a restatement, in much better words, of course, of something which was said by a great mystic long ago: that "God created man for immortality, and hath set eternity in his heart."

An Address
ON
PITFALLS IN UROLOGICAL DIAGNOSIS.

Delivered at St. Mary's Hospital Post-graduate Course on Oct. 6th, 1929,

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Acute Pyelitis.

Acute pyelitis is an infection of the mucous membrane of the pelvis and calyces of the kidney most frequently caused by the *Bacillus coli*. The severity of the condition varies considerably. An unrecognised acute pyelitis can lead to a chronic condition, which may prove to be most intractable. The great importance of early diagnosis is illustrated by the following case:—

A British officer, while serving in Mesopotamia, was suddenly taken ill with severe pain in his left side, a high temperature, and rigors. The diagnosis was sandfly fever, and the local symptoms were referred to an enlarged spleen, which was said to be present. He came to see me in 1924, when he had been overhauled and chronic pyelitis had been correctly diagnosed by many surgeons, but his symptoms had not been relieved. A routine urological examination revealed a left kidney infected with *B. coli*, a right kidney free, and the bladder unaffected. For one year he showed marked improvement and then suddenly relapsed. I asked Mr. Girling Ball to see him and he was advised to have a nephrectomy done as the only hope of clearing up his symptoms. Before this could be arranged he nearly died of hæmorrhage from an acute hæmorrhagic cystitis. Finally, in 1926, a left nephrectomy was performed and the patient is now alive and well. But his history shows what disaster can follow a missed pyelitis.

The symptoms of acute pyelitis are pain, vomiting, high fever, rigors, pyuria, and later frequent and painful micturition.

Pain.—This always starts in the side or lateral part of the abdomen, and is often described by patients as being situated in the iliac fossa. Never at any time is it referred to the central area of the abdomen. When the attack is established the pain is about the level of the umbilicus, extending from the outer edge of the rectus sheath round the loin to the margin of the erector spinæ. There may be typical referred pain in the groin, labium, scrotum, and down the thigh. It is continuous and not colicky. The severity of the condition varies considerably and cases are therefore classified as mild, severe, and fulminating.

Vomiting.—In most cases in the early hours of the attack there will be a single attack of vomiting, usually immediately after the onset of the pain.

Fever and Rigors.—The temperature is always high and may reach 105° F., and rigors are the most important diagnostic sign. I have never seen an acute pyelitis without a rigor.

Frequent and painful micturition are evidence of bladder irritation and are seen only after a few days, and then only in severe or unrecognised cases.

Pyuria.—In every case pus will be found in the urine, but at the beginning of the attack, when the diagnosis is in the balance, pus is in small amount only, and the more severe the case the less will there be at first.

Differential Diagnosis.

The diagnostic pitfalls are many. The right kidney is more frequently affected than the left in every unilateral renal lesion, and it is in the right-sided pyelitis that the difficulties are greatest. The appendix is at hand, the mimicry of its symptoms is not to be questioned, and acute appendicitis is a very common disease. Moreover, since the one condition demands immediate operation and the other is aggravated by unnecessary operation, the diagnosis is really important. We are here confronted with a clear-cut issue. It is not a question of there being something inside which demands exposure, but of the presence of a lesion which can be easily treated medicinally, and which can become a severe menace to health if unrecognised. I submit that if certain

principles are kept ever in sight the diagnosis need never be in doubt. The points to remember are:—

1. In acute appendicitis the pain always starts centrally in the abdomen around the umbilicus and spreads in time to exact localisation in the iliac fossa. In acute pyelitis the pain starts in the side.

2. In appendicitis a raised temperature is common, but not to the same height as that which characterises acute pyelitis.

3. No uncomplicated acute appendicitis ever has a rigor. No acute pyelitis is ever without one.

4. The urine should be examined. It may seem futile to discuss the pitfalls of diagnosis in acute pyelitis when an examination of the urine will settle the issue. But all of us can recall cases where the urine was forgotten. A quiet unoffending appendix may have been removed and days later, when frequent and painful micturition is noticed following appendicectomy, the pyelitis is regarded as a complication. But in truth the pyelitis is not a complication but the primary lesion. James Sherren once said that every bed should have a finger-stall suspended beside it; he might have added the suggestion that the abdomen of every patient should have emblazoned on it in the letters of imagination "Forget not the kidney." There are other conditions which may cause difficulties in diagnosis—e.g., gall-stones, cholecystitis, and other renal lesions. But the appendix is the chief villain of the piece.

The fulminating type of acute pyelitis is of so sudden, so dramatic an onset, and so disastrous a severity that it may be mistaken for a perforation of an ulcer, acute pancreatitis, and so on. The following case illustrates this:—

A young woman, who had been married about a year and lived abroad, was in London on a visit and dining with a large party at a restaurant when she suddenly collapsed. She vomited and was removed to a nursing home, where she was found to have a temperature of over 105° F., intense pain, and rigidity on the right side. Several diagnoses were suggested, but the occurrence of rigors and the presence of pus in the urine clinched the matter and the patient's return to health was rapid.

Hydronephrosis.

The next pitfall in urological diagnosis is hydronephrosis. The well-established type with a large sac presents a classical picture. There are recurrent attacks of pain in the side, followed by a distinct diminution in quantity of urine passed and the gradual appearance of a tumour in the loin. Later, with the relief of the obstruction, comes the passage of great quantities of urine and the subsidence of the tumour. This definite clinical picture is the one described in text-books and manuals of urology whose authors tend to overlook the fact that every hydronephrosis must have a beginning in a normal kidney, and that there is a long way to go before a large sac is formed. The first change in a kidney in commencing hydronephrosis is the obliteration of the indentation of the pyramid into the calyx, which, therefore, becomes clubbed and not cupped. But this gives but little added capacity to the pelvis, and no general enlargement of the kidney occurs. It is well worth diagnosing these cases early, because as the hydronephrosis enlarges, the kidney cortex atrophies and may finally become a mere shell; the earlier the diagnosis the less interference with renal function. In the early cases pain is the only symptom, and they fall into an acute and a chronic type. In the acute type there is a sudden onset of acute pain in the side, a single attack of vomiting, without fever, rigors, or any urinary changes. In the chronic type there are recurring attacks of pain, which is gradual in onset and less severe, and rather a dull aching pain in the loin, with a complete absence of any other symptoms.

The diagnostic pitfalls are numerous, but perhaps the most common is to mistake the chronic hydronephrosis for a chronic appendicitis. I myself am convinced that there is no such condition as chronic appendicitis in the absence of a previous acute attack, but I am aware that all surgeons would not go so far. In any event no case of chronic right-sided pain should be labelled chronic appendicitis until every other possible diagnosis has been adequately explored. If the possibility of a hydronephrosis is thought of, its presence can be proved or disproved by a pyelographic examination, a simple procedure for everyone concerned, including the patient.

Symptomless Hæmaturia.

Blood may be present in the urine in addition to other abnormal constituents, and with symptoms which make diagnosis easy. There is, however, one group of patients in whom hæmaturia is the only symptom. The blood comes either from the bladder, when a simple cystoscopic examination reveals the source and nature of the trouble, or from the kidney. For renal bleeding we are almost entirely dependent on the vision of blood coming from one ureteric orifice for localising the lesion to one side. It is true that X rays, with or without pyelographs, may reveal the cause, but in a large group of cases the blood must be seen by cystoscope, and the problem is to get the patient examined while he is still bleeding. Often he comes to see us bringing with him a specimen of urine full of blood, but a fresh specimen reveals none; in other cases cystoscopy is delayed so long that a negative examination results. Patients must be instructed to come for examination the moment they see their urine becoming red, even if it means leaving work; and when they present themselves a cystoscopy must be undertaken at once. The need for hurry is the fact that many of these patients are bleeding from a renal new growth.

The way in which blood is passed, whether before or after or during micturition, whether pure blood or mixed with urine, is of no diagnostic import. One point, however, should be noted. Occasionally a clot will be passed, long, cylindrical, and worm-like. This is a ureteric cast, and is pathognomonic of a renal neoplasm. The following case shows the difficulties in symptomless hæmaturia.

A man, aged 56, was seen after an attack of blood in the urine. A complete urological overhaul, including a double pyelography, revealed nothing. On four subsequent occasions he came one, two, or three days after bleeding, always with a negative result. At last I insisted upon his coming up the instant he noticed anything. This time he noticed blood in the urine before a luncheon interval at work. He left his office at 1.25 P.M. and was on the table being cystoscoped at 2.5 P.M. Blood was seen pouring from the right orifice, but it now no longer interested us because a nodular tumour of his right kidney could be felt. This proved inoperable, and although he came first at a period when the tumour must have been removable, nothing short of exposure of both kidneys could have given us the diagnosis.

This case shows the urgent necessity of investigating a hæmaturia at once, and not only within 24 or 36 hours.

Conclusion.

In conclusion, let me draw your attention to one method of investigation which is of particular interest in renal lesions—viz., the hyperæsthesia of the skin. Head's work mapped out brilliantly and accurately the skin areas corresponding to the different viscera. I must admit I have been singularly disappointed with the value of hyperæsthesia tests for any viscus save the kidneys. Renal lesions give a very high proportion of positive tests, and the areas should always be mapped out if present. No negative hyperæsthesia test is of any value, but a positive one may prove the conclusive piece of evidence needed. I hope I have succeeded in bringing before you a picture of some of our difficulties in urological diagnoses, and I shall be happy if I have succeeded in refreshing in your minds the teaching of your old teachers, that in every case of abdominal pain the urine should be examined, and the kidneys remembered as the possible source of the trouble.

THROMBOSIS OF THE SUPERIOR CEREBELLAR ARTERY.

INCLUDING REPORT OF A CASE WITH UNUSUAL CEREBRO-SPINAL FLUID REACTIONS.

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THE case described illustrates certain interesting points in the clinical syndrome resulting from thrombosis of the superior cerebellar artery, and provides further material upon which the identification of that syndrome can be based. In addition, the changes in the cerebro-spinal fluid are sufficiently unusual to be worthy of attention.

The patient, a female aged 55 years, was admitted to hospital on Dec. 1st, 1928, complaining of loss of power in the left arm and leg, together with spontaneous movements of the left arm. These symptoms had been present for three weeks, but the total duration of the illness was five months. She had been in poor health for 12 months. For five months she had fidgeted with the left arm, had suffered from attacks of giddiness, and had vomited in the morning. During that time she had been very irritable and easily upset; and at times depressed and excited. Five weeks before admission she had complained of pain across the shoulders and in the left arm; then for two weeks she had suffered from "dermatitis" involving the body but not the face. For three weeks there had been gradually increasing loss of power in the left arm and leg, and the spontaneous movements of the left arm had become more severe. Speech had been a little thick during this time. Five years before she had had an attack of pleurisy and "congestion of the lungs." Shortly afterwards she had had an accident in which she cut the left eyebrow. She had been married 24 years. There had been no pregnancies. Of the previous marriage there were two children, one of whom had died of a spinal complaint.

Condition on Examination.

The pupils were small, the left larger than the right; both were irregular and reacted normally. Vision was good in the left eye and slightly deficient in the right eye. There was apparent narrowing of the visual fields on the temporal side, but a perimeter chart of the fields showed that there was moderate concentric contraction of both fields. The temporal halves of both optic discs were pale; the arteries were small and showed a white reflex; the veins were engorged and kinked where crossed by arteries. The ocular movements were normal and there was no nystagmus. In speaking some words were slurred but everything could be easily understood. Hearing was fairly good. Excepting for weakness of all the facial movements, the other cranial nerves were normal.

Cotton-wool, pain, and thermal sensibility were apparently less distinct in the left arm than in the right. The difference between the two sides was much more obvious in the arms than in the legs. Deep pressure was unaffected. In the left arm there was loss of the sense of position, vibration sense was absent, and localisation was defective. The recognition of size and shape was also defective in the left hand, but normal in the right hand. Because of the variability of attention finer changes could not be elicited. In the right arm motor power was fairly good, muscle tone was normal, and the deep reflexes were sluggish. In the left arm motor power was very poor, muscle tone was much diminished, and the deep reflexes were absent. In the right leg motor power was fairly good, muscle tone was normal, the knee- and ankle-jerks could not be elicited, and the plantar reflex was flexor. In the left leg motor power was much decreased, muscle tone was diminished, the knee- and ankle-jerks were absent, and the plantar reflex was flexor. The abdominal reflexes were all absent. The patient could neither stand nor walk.

Wavy, sinuous movements with a definite, slow pattern, but failing to reach an object if directed towards it, occurred in the left arm on attempts at effort or on emotion. There were slow serpentine movements of circumduction at the shoulder, pronation and supination of the forearm, flexion and extension of the elbows and wrists, flexion and extension of the interphalangeal joints with abduction and adduction of the fingers. With the finger-nose test, on the right there was a slight intention tremor with the eyes open, slightly increased with the eyes closed; on the left there was a pronounced intention tremor with exaggeration of the spontaneous movements, apparently resulting from them. It was impossible to test for Rombergism. Repeated alternating movements were performed clumsily in the right hand and arm and were impossible in the left arm. Rebound was fairly good in the right arm but exceedingly poor in the left. The initiation of the slightest voluntary movement in the left arm resulted in the whole range of the movement being carried out suddenly and the hand falling in a flail-like manner against the face, the body, or the side of the bed. There was definite decomposition of movements and dysmetria in the left arm. An attempt to hold the arms horizontally and parallel in front of the body with the eyes closed resulted in a very slight spontaneous deviation of the right hand to the right and the spontaneous movements of the left arm and hand.

The sphincters were normal. The abdomen was full and the anterior abdominal wall rather lax. The bowels were normal. The heart and peripheral vessels were normal but the retinal arteries were arterio-sclerotic. The pulse was regular; the blood pressure was 160 systolic and 115 diastolic. The patient had a frequent, loose cough; there were sonorous rhonchi over the right lower chest behind, and fine crepitations were audible at both bases. The skull and spine were normal.

The cerebro-spinal fluid obtained by lumbar puncture was clear and contained five "small lymphocytes" per c.mm. There was 0·24 per cent. of total protein. Globulin was present in very marked excess, mostly pseudo-globulin, with the faintest trace of fibrinogen and a trace of euglobulin. Free complement was present. The Wassermann reaction was completely negative with the heated fluid. The Lange test produced the curve: 2345444443. The Wassermann reaction in the blood was negative.

Attention could be gained but not maintained for any length of time; perception and orientation were normal; the memory was defective, and the reasoning power was apparently unaffected. On account of the difficulty in keeping the patient's attention, those parts of the clinical examination dependent upon her coöperation were difficult to carry out.

Subsequent Progress.

Dec. 14th, 1928.—All types of sensation were impaired in both the upper and lower limbs and the patient's coöperation and attention were not so good as they had been at the previous examination. The changes were more advanced in the left arm and had appeared in the right arm as well. In the left arm motive power was practically absent, the limb was flaccid and definite movement towards an object was impossible. An attempt to test the rebound of the limb resulted in its falling like a flail. In the right arm motor power was very poor, muscle tone was decreased, and there was definite intention tremor. Rebound was very poor, while dysmetria and decomposition of movements was quite evident. In the left leg motor power was very poor, the limb was flaccid, the knee-jerk was absent, and there was no response on stimulation of the sole of the foot. In the right leg the same changes were evident, except that the loss of tone was not so pronounced. The right pupil was larger than the left, and both reacted sluggishly to light.

Dec. 31st.—The patient had a respiratory infection with a febrile reaction and rhonchi over the whole of the chest. The heart sounds were strong. The condition of the left arm was unchanged, but the right arm had become almost as hypotonic as the left, with pronounced flaccidity, absence of deep reflexes, dysmetria, decomposition of movements, and absence of rebound. There was complete inability to retain either the right or the left arm in one position. The left leg was unchanged, but in the right leg hypotonia was more pronounced. On both sides an attempt to elicit the plantar reflex produced no response. Spontaneous movements were present in both the right and the left arm when movements of the limbs were commenced voluntarily. Local muscle "twitchings" were present in all four limbs. A chart of the visual fields showed moderate concentric contraction of both fields.

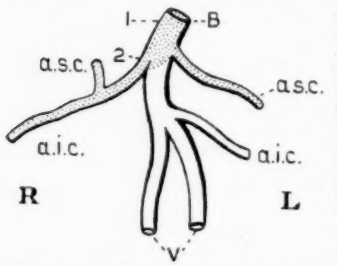
Jan. 1st, 1929.—There were numerous crepitations at both bases.

Jan. 2nd.—The right base was dull on percussion, there were numerous bubbling râles over the whole of the back of the chest, and the heart sounds were failing. Death occurred the following day.

The Pathological Findings.

The autopsy was confined to the brain. There was no evidence of any gross lesion on naked-eye examination. The arteries at the base was examined in detail and found to vary somewhat from the usual anatomical arrangement,

(See figure.) After giving off the posterior inferior cerebellar arteries, the two vertebral arteries united to form the basilar artery at the lower border of the pons. A little above this level a small branch, probably the anterior inferior cerebellar artery, was given off on the left side and distributed to the anterior portion of the inferior surface of the left lateral lobe of the cerebellum. Slightly below the middle of the pons there was a large branch on the right side which immediately divided into two branches, the lower representing the anterior inferior cerebellar artery and the upper the superior cerebellar artery. At the middle of the pons a large branch was given off on the left side—the left superior cerebellar artery. The lumen of the vertebral arteries, the posterior inferior cerebellar arteries, the left anterior inferior cerebellar artery, and the basilar artery as far as the large branch on the right side was quite patent. From the large branch on the right side up to the posterior communicating branches the basilar artery was definitely thrombosed. This thrombus extended into the common stem of the superior cerebellar and anterior inferior cerebellar arteries on the right side and into the superior cerebellar artery on the left. No naked-eye changes were visible in the area of distribution of these vessels.



Diagrammatic representation of the arteries at the base of the brain in the case described. The vertebral arteries (V) unite to form the basilar artery (B) and at once give off the anterior inferior cerebellar artery (A.I.C.) on the *left* side. Above this level and slightly below the middle of the pons, on the *right* side, there arises from the basilar artery a large branch which immediately divides into two branches—the lower (A.I.C.) representing the right anterior inferior cerebellar artery and the upper (A.S.C.) the right superior cerebellar artery. At the middle of the pons a further branch is given off on the left side—viz., the left superior cerebellar artery. The shaded area represents thrombosis. 1 = Recent red thrombus with (microscopically) great excess of leucocytes. 2 = Recent thrombus slightly adherent to vessel wall with more fibrin than 1, and some endarteritis proliferans of inner coat.

Sections of the basilar artery were made (1) midway between the left superior cerebellar artery and the posterior communicating branches; (2) at its junction with the left superior cerebellar artery; and (3) at its junction with the common stem of the right superior cerebellar and anterior inferior cerebellar arteries. Microscopical examination of the first section showed the presence of recent red thrombus with a great excess of leucocytes, both polymorphonuclear and mononuclear cells. The second section showed similar changes, but a little more fibrin was present; the clot was slightly adherent to the wall of the vessel and there was some endarteritis proliferans of the inner coat. The third section was similar to the second, the latter including the left superior cerebellar artery and the former the common stem of the right superior cerebellar artery and anterior inferior cerebellar artery.

Vertical antero-posterior sections were made through the lateral lobes of the cerebellum close to the pons. The sections were examined particularly for evidence of degenerative changes and of any obvious differences between the two sides. Nothing very striking could be made out either in the molecular or the granular layers, excepting perhaps some degenerative rarefaction at the junction of these parts where the Purkinje cells lie, though probably some of this appearance was merely an artefact. In the white matter of both sides of the upper half of the cerebellum there were, however, some small scattered areas of glial rarefaction—"froth-like areas"—probably around or in the neighbourhood of blocked or degenerated vessels, a few of them almost amounting to small degeneration pseudo-cysts. Occasional vessels showed some perivascular "small round-cell" collections, and many had dilated lymphoid spaces around them. Some thrombosis of small vessels was also present in the lower part of the superior cerebellar peduncles and in the lateral parts of the pons.

Commentary.

When the patient came under observation there was probably a number of small thromboses in different parts of the brain, as suggested by the decrease in the patient's mental acuity. The physical signs elicited at that stage would appear to have been due to two distinct groups of thromboses. The spontaneous movements, loss of muscle tone, and the associated changes in the left arm were probably the result of thrombosis of the left superior cerebellar artery, while the sensory changes on the same side were probably the result of thromboses already present in the small pontine branches of the basilar artery on the right side. It appears to be unnecessary to assume that the motor changes and the variations in sensation were the result of the thrombosis of a single artery in a patient in whom there was some evidence of multiple thromboses elsewhere. Such, however, would appear to be the assumption made by Guillain, Bertrand, and Peron in their description of a case of thrombosis of the superior cerebellar artery and identification of the syndrome of the superior cerebellar artery. In their case the three important groups of symptoms were: (1) involuntary movements of the right side and particularly of the arm; (2) a right-sided hemi-cerebellar complex; and (3) left-sided dissociated hemi-anæsthesia of the syringomyelic type. Associated with these symptoms was softening of the superior aspect of the right cerebellar hemisphere and of the lateral aspect of the right side of the pons; disintegration of the right superior cerebellar peduncle and lateral fillet, and no involvement of either the pyramidal system or any of the cranial nerves. It is difficult to see why the entire clinical and pathological picture in this case was included as the syndrome of thrombosis of the superior cerebellar artery. It is more probable that the symptoms and pathological changes referable to the lateral part of the pons were due to thrombosis of the small pontine branches of the basilar artery on that side, and that the symptoms and pathological changes referable to the cerebellum and superior cerebellar peduncle were the result of thrombosis of the superior cerebellar artery on that side. If that were so, the pontine symptoms would have been comparable to those which appear when the lateral arteries of the medulla become thrombosed. The clinical and pathological findings in our case support the view that the clinical picture in Guillain, Bertrand, and Peron's case [1] was the result of two distinct groups of thromboses, for in our case it is impossible to explain the occurrence of sensory changes and cerebellar signs on the same side by postulating that the superior cerebellar artery supplies the lateral aspect of the pons as well as the superior surface of the cerebellum and the superior cerebellar peduncles.

We suggest, therefore, that the syndrome of thrombosis of the superior cerebellar artery might more correctly be defined as: (1) involuntary movements, particularly of the arm on the side of the lesion, together with (2) symptoms of a unilateral cerebellar lesion on the same side. The movements are wavy and sinuous with a definite, slow pattern, failing to reach an object if directed towards it, absent at rest, but appearing and aggravated by attempts at movement or by emotion. The symptoms of a unilateral cerebellar lesion present are those usually associated with such a lesion, but the loss of muscle tone is the most prominent feature. The symptoms are also much more definite in the arm than in the leg.

The pathological changes underlying the subsequent clinical picture in our patient were probably thrombosis of the pontine branches of the basilar artery on the left side as well as on the right, thrombosis of the basilar artery itself and occlusion of the common stem of the superior cerebellar and anterior inferior cerebellar arteries on the right side. The constriction of the visual fields was probably due to interference with the blood-supply to the visual cortex by way of the posterior cerebral arteries; this interference was only partial, partly because of the incomplete occlusion of the vessel and partly because of the anastomotic supply to the visual cortex, particularly to the area for macular vision, through the middle cerebral artery.

It is interesting to note that the so-called syndrome of the superior cerebellar artery was much more extensive on the right side than on the left, in that the leg

[1] Guillain, G., Bertrand, I., and Peron, N.: Rev. Neurol., 1928, ii., 835.

was affected quite as seriously as the arm. This was due to the unusual anatomical arrangement on the right side—the superior cerebellar and the anterior inferior cerebellar arteries arising from the basilar artery by a common stem. Consequently thrombosis of the stem and of its two branches resulted in interference with the blood-supply of part of the inferior surface of the cerebellum as well as of the superior surface. The difference in the clinical pictures on the two sides strongly supports the localisation of the control of movements of the upper limbs in the upper part of the cerebellum, and of those of the lower limbs in the lower part of the cerebellum.

The changes in the cerebro-spinal fluid were unusual and resembled those seen in cases of spinal block. Free complement was present in the fluid, and in the Lange test there was maximum decolorisation of the gold solution in the middle of the series of dilutions. These changes, so common in cases of spinal block, appear to be equally characteristic of cases of cerebral thrombosis in which it is probable that there is some encroachment of the thrombotic areas on the cerebro-spinal fluid system.

We are greatly indebted to Dr. W. E. Carnegie Dickson for the pathological report.

Summary and Conclusions.

1. A detailed description is given of a case of cerebral thrombosis in which the prominent early lesion was thrombosis of the left superior cerebellar artery.

2. The syndrome of thrombosis of the superior cerebellar artery includes spontaneous movements on the side affected, together with the symptoms and signs of a unilateral lesion of the cerebellum on the same side.

3. There appears to be no justification for including the sensory changes frequently present as a part of the syndrome of occlusion of the superior cerebellar artery; they are much more satisfactorily explained as the result of other thromboses in the small pontine branches of the basilar artery.

4. When the superior cerebellar artery arises alone from the basilar artery the clinical picture of thrombosis of the vessel is that described above and involves chiefly the arm; when, however, this vessel arises by a stem common to it and to the anterior inferior cerebellar artery, occlusion of this stem produces changes in the affected leg almost as definite as those in the affected arm.

5. The changes in the cerebro-spinal fluid are similar to those occurring in cases of spinal block: they are probably the result of encroachment of thrombotic areas on the cerebro-spinal fluid system.

AURICULAR FIBRILLATION IN CHILDREN.

BY HAROLD COOKSON,* M.D., B.Sc., M.R.C.P. LOND.

(*From the Cardiographic Department, London Hospital.*)

IT is well known that complete arrhythmia is uncommon in children. In the tables of the age-incidence of the disorder which have been published relatively few cases under 20 years occur. Levine found none under 17 out of 128; Brachmann found none under 16, and eight only between 16 and 20, out of 400; Willius had five cases between 11 and 20, out of 500; Mackenzie records five cases under 20, out of 500; Cowan and Ritchie had six between 10 and 19, out of 300; Coombs in 58 cases of rheumatic heart disease had two between 11 and 20; Hart found one under 10 in 300.

In the first decade auricular fibrillation has occurred so rarely that the published records nearly all deal with isolated examples. It has been recorded that fibrillation developed in a child of 3 (Samet and Tezner); digitalis was being given but the authors deny any connexion between the medication and the arrhythmia. No graphic record is published, however, in support of the claim, and as fibrillation is otherwise unknown at this age, the case cannot be accepted as authentic. Resnik and Scott publish the case of a boy of 4 with auricular fibrillation: the aetiology is uncertain, but is probably rheumatic. This is the youngest case in which graphic proof is supplied. Leys and Russell recorded the case of a boy of 6 who came under observation with a large heart. At first there were three distinct rhythms—probably auricular flutter, auricular fibrillation, and normal rhythm—but since then, a period of two years, fibrillation has been present, and the child has had to be kept in bed most of the time on account of cardiac and acute rheumatic symptoms (personal communication). Other solitary cases are reported by Ogden, Ehrenreich, Nobecourt and Pichon, and Sidel and Dorwart. A case recorded by Nadel is quoted by Schwartz and Weiss as an example of fibrillation in a child of 10 or under, but the description of the electrocardiogram, which is not itself published, suggests flutter. Moreover, the child was 11 when the abnormal rhythm was first observed. In the case described by Sutherland and Coombs, the polygram, as Schwartz and Weiss also note, is more suggestive of premature beats than fibrillation. Again, in that of Price and Ivy Mackenzie, said to show fibrillation and complete block, the tracing published leaves the diagnosis of fibrillation uncertain. Neuhof cites the case of a child of 8 whose electrocardiogram is said to show a short paroxysm of fibrillation lasting about three seconds; it is difficult, however, to exclude an instrumental cause for the oscillations which have been taken to indicate fibrillation in this record. In Coombs's series of rheumatic cases with fibrillation there are two under 10, but no details are given. In these 11 reported cases, aged 10 or less, rheumatic heart disease was certainly present in six and probably present in two others. In three of the cases in which the arrhythmia was permanent, death occurred on the average seven months after it was discovered. One patient is still alive two years after the inception of fibrillation, though confined to bed.

Recently Schwartz and Weiss have asserted that fibrillation in children is not nearly so rare as has been supposed. They recorded it with the electrocardiograph in 10 out of 60 patients admitted to hospital with rheumatic heart disease in a period of five and a half years. Six were aged 7½ to 10, and four 11 to 15. Four of their cases died within a week of the onset, and three more within a year. The authors believe that the unusually high incidence of auricular fibrillation in their cases was the result of more careful observation and, as evidence in support of this, they quote the incidence—a much lower one—for a previous period in their hospital. Another factor must be considered, however, and that is the quantity of digitalis which their patients received; in the instances in which the dose is stated, the amounts usually exceed those which in this country would be considered adequate for an adult. All were having digitalis at the time of onset of the arrhythmia. In discussing the causation of the arrhythmia in their cases Schwartz and Weiss consider digitalis as a factor, but only in one case do they regard it as being definitely related to the onset; in the others they regard the relationship as unproved. It remains quite likely, however, that digitalis is the explanation of the high incidence of fibrillation which they discover in children. There is no lack of evidence, both experimental and clinical, that digitalis is able to produce auricular fibrillation. (See Danielopolu, Mackenzie, Reid, and Resnik.)

Thirty-five Cases of Auricular Fibrillation in Children.

In 15 years (1913–28) auricular fibrillation was diagnosed in 1164 cases admitted to the London Hospital; females were twice as numerous as males.

* Working under the Paterson Bequest.

Those of 17 and under have for the purpose of this investigation been considered as "children." There were 30 "child" cases, or 2·5 per cent.; five have been added from other sources making 35 in all; the sex ratio was three girls to two boys—a smaller female predominance than in the adults. The youngest was aged 12. The diagnosis of fibrillation rests on graphic proof in only 10 cases—an unfortunate fact, due largely to the present reliability of clinical methods which are satisfactory for any but research purposes, and partly to the serious condition of some of the patients, which did not justify interference for non-essential examinations. Where graphic records are lacking the other findings are as conclusive as possible, and in all the following criteria are satisfied: rapid and very irregular heart, persistent irregularity, and response to digitalis by considerable slowing. Rheumatic heart disease was the basis of the arrhythmia in all cases, and a history of the acute illness was lacking in six only. The average age at which the first rheumatic symptom showed itself was not unusually early, though a majority of the cases had suffered from symptoms of heart disease for a considerable period before the onset of the irregular rhythm; in 19 cases this period averaged four and a half years; in four cardiac symptoms appeared for the first time with the onset of fibrillation. As is the rule in adults, failure was a familiar accompaniment of the inception of the new rhythm and occurred in 22 out of 30 in which satisfactory information on this point could be obtained. In five failure had made its appearance while normal rhythm was present, and in the remaining three no failure was observed immediately or shortly after the onset.

Clinically, mitral stenosis was diagnosed in 25 of the 35 cases, four of these having aortic incompetence in addition; in two the aortic valve alone was affected. The heart was enlarged to palpation in all, considerably so in 17 (48 per cent.). Thirty-one cases have now been traced, and of these 23 have died of heart disease after an average duration of ten months with auricular fibrillation, the maximum period being five years and the minimum three weeks. It is interesting to note the fate of three patients in whom reversion to normal rhythm took place after short periods of fibrillation. In one in whom the reversion was spontaneous death occurred five years afterwards from meningitis, normal rhythm persisting till the end. Another, a boy of 16 successfully treated with quinidine, is alive and has normal rhythm six and a half years later, and is able to do light work. The third case merits, perhaps, a description in more detail.

In 1913 a girl, aged 17, was admitted to hospital with mitral stenosis, auricular fibrillation, and failure, the onset of which coincided with that of the abnormal rhythm. Treatment with rest and digitalis gave some relief but she was still very ill at the time of her discharge and the parents were told that she would be unable to do any work. In 1929, 16 years later, she reported at the hospital with normal rhythm. The heart was considerably enlarged, and the signs of mitral stenosis and aortic incompetence were present. She was in fairly good health, and said that from a time six months after her discharge from hospital she had been doing office work, and her only enforced absence from this had been a period of two weeks with "influenza." Moreover, she was able to dance and to play tennis for an hour at a stretch. It is impossible to date the return to normal rhythm in this case, but it probably happened soon after she left hospital as she has never since felt the heart beating rapidly as it did then.

The subsequent duration of life in these three instances of return to normal rhythm forms a contrast with the expectation of life in those with persistent fibrillation, which may not be without significance.

Established fibrillation in young people of 17 and under must be regarded as a serious condition which is not long survived. In 23 cases the average duration of life after the onset of the abnormal rhythm was ten months. During those months the patients were confined to bed with congestive heart failure on which rest and digitalis had little effect. This is in contrast with the corresponding condition in adults, in whom the average duration of life is much longer (four and a quarter years in a group of 47 rheumatic cases followed up till death),† and appropriate treatment commonly gives rapid relief. No other cause than rheumatic heart disease was found to account for fibrillation in children. It was not found that rheumatic fever had affected the patients at an earlier age than usual, but a history of suffering from heart disease for several years before the onset of the arrhythmia was the rule, although severe symptoms and the signs of congestive failure only appear, in the majority, when the change in rhythm occurs.

I have to thank Dr. John Parkinson for his help and those physicians of the London Hospital who have permitted me to use their cases.

References.

Brachmann, D. S.: THE LANCET, 1921, i., 374.
Coombs, C. S.: Rheumatic Heart Disease, Bristol, 1924, p. 216.
Cowan, J., and Ritchie, W. T.: Diseases of the Heart, London, 1922, p. 175.
Danielopolu, D.: Compt. rend. Soc. de biol., 1916, lxxix., 97.
Ehrenreich, S. G.: New York Med. Jour., 1914, xcix., 269.
Hart, T. S.: The Diagnosis and Treatment of Abnormal Myocardial Function, New York, 1917, p. 138.
Levine, S. A.: Amer. Jour. Med. Sci., 1917, cliv., 43.
Leys, D. G., and Russell, H. B.: THE LANCET, 1927, ii., 702.
Mackenzie, J.: Heart, 1910–11, ii., 273.
Mackenzie, J.: Diseases of the Heart, Oxford, 1925, 4th edit., p. 184.
Nadel, V.: Mitt. d. Gesellsch. f. inn. Med. u. Kinderh. in Wien, 1913, xii., 210.
Neuhof, S.: The Heart, Philadelphia, 1923, p. 151.
Nobecourt, P., and Pichon, E.: Arch. de. méd. des enf., 1925, xxviii., 493.
Ogden, R. T.: Amer. Jour. Dis. Child., 1925, xxix., 767.
Price, F. W., and Mackenzie, I.: Heart, 1911–12, iii., 233.
Reid, W. D.: Jour. Amer. Med. Assoc., 1923, lxxxi., 435.
Resnik, W. H.: Jour. Clin. Invest., 1924–25, i., 181.
Resnik and Scott, W. J.: Amer. Jour. Dis. Child., 1926, xxxi., 357.
Samet, B., and Tezner, O.: Monatschr. f. Kinderh., 1926, xxxi., 300.
Schwartz, S. P., and Weiss, M. M.: Amer. Jour. Dis. Child., 1928, xxxvi., 22.
Sidel, N., and Dorwat, F. G.: Boston Med. and Surg. Jour., 1927, excvi., 216.
Sutherland, G. A., and Coombs, C. F.: Heart, 1913–14, v., 15.
Willius, F. A.: Minnesota Med., 1920, iii., 365.

GLUCOSE INTOLERANCE IN VARIOUS DERMATOSES.

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SINCE 1915, when Pels published his results of an investigation of the blood-sugar content of 50 cases of various dermatoses, several papers have been written on the subject, but, although all the investigators agree that a slight hyperglycæmia occurs, the type of lesion in which the rise is present varies in the different papers.

Pels [1] found the blood-sugar varied from 0·07 to 0·156 per cent., the average being 0·107. These readings showed hardly any increase above the normal, but were approaching the higher limit of normality. He suggested that further research would elucidate the types of lesion in which an alimentary hyperglycæmia could be inferred, and that the treatment of hyperglycæmia would be a useful aid in the treatment of skin diseases.

In 1916, Highman, Schwartz, and Mahnken [2] investigated 149 cases, 89 of which gave no increase, but a group of 60 cases of acne, seborrhœa, and sycosis gave a more or less constant hyperglycæmia. They considered that lesions of the pilosebaceous follicles were more liable to be associated with hyperglycæmia. In 1921, Pick [3] reported an almost constantly increased blood-sugar content in cases of psoriasis, a slight increase in the majority of seven cases of furunculosis, and a moderate hyperglycæmia in six

† Unpublished observations.

of 12 cases of secondary syphilis. McGlasson [4] investigated a large series of cases but only took one reading of each patient. He did not think that the hyperglycæmia was the only ætiological factor but noted a definite sensitiveness in some cases, and that the hyperglycæmia was higher at each recurrence of the disease. He found a marked improvement in the skin lesion when the patients were given a carbohydrate restricted diet.

In England Haldin-Davis, working with Willis,[5] found a definite abnormality in 13 out of 20 cases of eczema but was unable to correlate abnormalities in blood-sugar with any particular type of eczema. He found that diabetic treatment was unsatisfactory. Campbell and Burgess [6] divided skin lesions associated with hyperglycæmia into two groups—namely, those occurring during pregnancy and those developing in patients over 50 years of age. They reported good results following suitable dieting, and pointed out that there is nothing to suggest sugar intolerance in the appearance of a lesion, but that it should be suspected where an intractable dermatitis develops in a person of middle age who was previously quite free.

The Present Investigation.

This paper embodies the result of personal investigation of 120 cases at the Manchester and Salford Hospital for Skin Diseases.

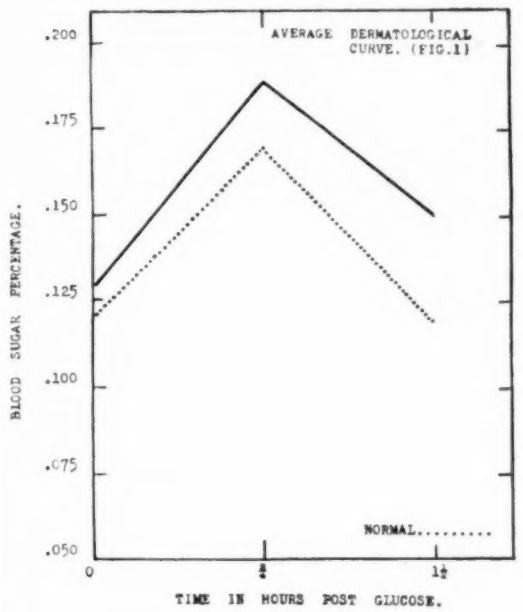
A fasting reading was taken in each case; 50 g. of glucose in 150 c.cm. of water were then given by the mouth and further readings taken three-quarters and one and a half hours later. The normal blood-sugar varies considerably in healthy subjects, so the average for a series rather than individual results have been taken wherever possible, and the highest limits of normality have been taken as 0·12 per cent. for the fasting level and 0·17 for the maximal reading.

Of 120 cases of all types of dermatoses only 28 (23·3 per cent.) gave normal sugar readings. The other 92 showed some deviation from the normal, though in many cases the abnormality was only slight. The average curve for the series was a fasting level of 0·13 rising to 0·188 three-quarters of an hour after the ingestion of glucose, and decreasing to 0·15 in another 45 minutes (Fig. 1). From these results it will be seen that a large percentage (76·7) of patients suffering from dermatological lesions show some abnormality in their blood-sugar content. Furthermore, the abnormality is in most cases of the "lag" type, an abnormality which points to some defect in the mechanism by which glucose is stored in the liver as glycogen.

The question next to be considered is the type of lesion in which a hyperglycæmia is liable to occur. To ascertain this a pathological classification was first adopted.

In psoriasis, of which 14 cases were examined, the average blood-sugar curve was raised throughout to a slight extent, rising from a fasting level of 0·13 to 0·19 per cent. in the second reading and falling to 0·16 in the last reading. In the lichen group—a group of diseases characterised by intense itching—the curve was higher throughout, rising from 0·151 to 0·207 and falling to 0·177. In nine cases of pruritus—localised and general—in which no cause for the pruritus could be discovered and which were, therefore, classified as pruritus simplex, the curve rose from 0·134 to 0·206, falling to 0·141 in an hour and a half. Forty cases of eczema showed on the average a very slight increase but some delayed lysis, the three estimations reading 0·131, 0·194, and 0·148. A group of 20 cases of disease of the pilosebaceous follicles, such as acne vulgaris and coccogenic sycosis, gave readings 0·121, 0·173, and 0·136, showing practically no increase at all.

From these figures it will be seen that a slight increase occurred in each group, but a much more marked increase was present in the lichen and pruritic groups. The statement of Highman, Schwartz, and Mahnken that diseases of the pilosebaceous follicles showed the most marked hyperglycæmia was not confirmed. In fact this group of cases showed the least deviation from normal of the whole series. Pathological classification did not point to any one lesion being associated with glucose intolerance. The lesions showing the greatest deviation from the normal—namely, the lichen and pruritic groups—had a common symptom in itching which is most marked



in both conditions. It was, therefore, thought desirable to investigate the association of hyperglycæmia with itching.

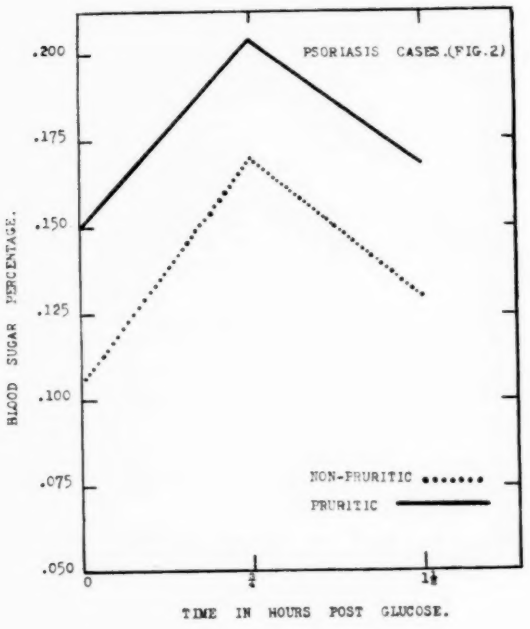
Symptomatic Classification.

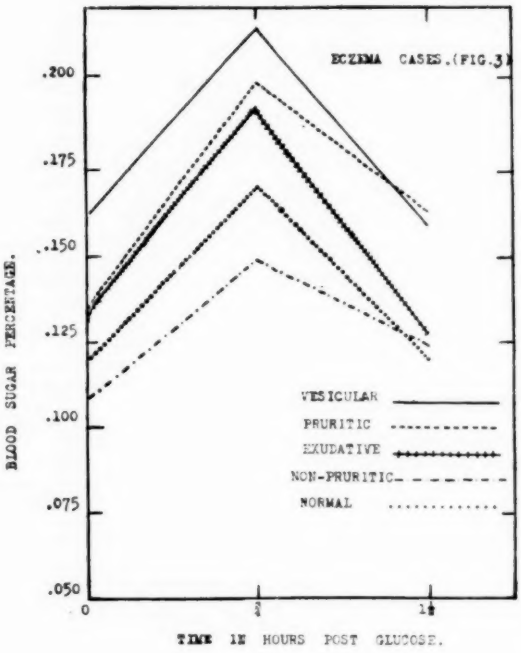
In considering the relation of pruritus to the presence of hyperglycæmia it is useful to have a lesion of definite pathology and clinical appearance in which pruritus is variable. Such a lesion is psoriasis vulgaris, which is a chronic inflammatory disease of the skin characterised by scaliness but in which there is no exudation.

In my series of psoriatic patients the disease was, to all appearances, identical in all the cases. Actively eruptinz lesions were not tested, since pruritus is present in this form more or less constantly, but in cases of some weeks' duration pruritus is sometimes present, sometimes absent. The cases chosen were clinically in the same stage of the disease—that is, they were of some weeks' duration and the surface of the skin had not been made sore by the application of strong ointments. Eight out of 14 of these cases were associated with pruritus and gave an average curve of 0·151, 0·204, and 0·169 per cent., while the remaining six cases in which pruritus was absent gave a much lower reading of 0·104, 0·17, and 0·13 (Fig. 2).

In the cases of the eczematous group the problem presented more difficulties since the term eczema covers a number of lesions which vary considerably in clinical features. The cases were divided, therefore, into four classes according to the clinical stages of the disease. The first stage consists of an erythema without abrasion of the surface and accompanied by intense pruritus, which is termed the pruritic type of eczema. This may progress to the formation of papules which later become vesicles; pruritus is still intense; this is termed the vesicular type. One or two changes may now take place; either the vesicles become broken giving rise to a "weeping" eczema, or the skin may resolve into a dry, hardened, non-pruritic condition. These types are termed respectively the exudative and the dry non-pruritic type.

In examining the average curves given by these four subdivisions it was found that the vesicular type gave the highest reading with the pruritic type slightly lower in the first two readings and slightly higher in the third reading. The exudative type came next with readings higher than normal, and the dry non-pruritic type lowest, with a response to glucose less than the maximal normal (Fig. 3).





Type of eczema.	Pruritus.	Fasting.	Blood-sugar estimation per cent.	
			¾ hr. post-glucose.	1½ hrs. post-glucose.
Vesicular ..	Present.	0·162	0·217	0·158
Pruritic ..	,,	0·136	0·202	0·163
Exudative ..	Absent.	0·122	0·193	0·127
Dry non-pruritic	,,	0·108	0·148	0·124

The values below normal of the dry non-pruritic type are of interest and suggest a response on the part of the organism to the raised blood-sugar content present in the earlier stages of the disease.

In eczema, therefore, it appears that pruritus and the occurrence of any hyperglycæmia are directly related. In addition, however, the presence of an epidermal exudate is also associated with hyperglycæmia for so long as the exudate is retained in the tissues, but, when the exudate escapes externally, as in "weeping" eczema, the pruritus ceases and the hyperglycæmia disappears. This suggests absorption of the epidermal secretion as a cause of the hyperglycæmia.

In addition, 58 out of 67 (86·6 per cent.) patients who complained of itching showed some intolerance to glucose.

Discussion.

McGlasson found a hyperglycæmia associated with pruritus and the present results confirm this. It is, however, impossible to state dogmatically that hyperglycæmia will or will not be present in any given case.

Previous writers suggest that the hyperglycæmia points to the patients being potential diabetics. Many of the cases in this series were under observation for two or more years, and in no case was a true diabetes or even glycosuria noted; in addition only a few diabetic patients give a history of previous skin trouble. There seems to be no definite evidence, therefore, for the assumption that these patients are potential diabetics.

In America, restriction of carbohydrate in the diet has given good therapeutic results in cases associated with hyperglycæmia. In our hands dietetic treatment has not been satisfactory although restriction of carbohydrate diet does lessen the pruritus in many cases. Some writers have found carbohydrate restriction of use in the treatment of acne vulgaris; this has not been our experience, as might be expected from the fact that such lesions do not show any marked abnormality in carbohydrate metabolism. Whether we should regard the hyperglycæmia as an ætiological factor or as a concomitant condition is the subject of further research.

In conclusion, I should like to express my indebtedness to Drs. G. H. Lancashire, Louis Savatard, and R. Gibson for allowing me the use of their cases, and to Dr. William Dyson, who has given much useful criticism and advice in the preparation of this paper.

References.

1. Pels, I. R.: Jour. Amer. Med. Assoc., 1915, lxv., 2077.
2. Schwartz, Highman, and Mahnken: Jour. Cutan. Dis., 1916, xxxiv., 159.
3. Pick, W.: Derm. Woch., 1921, lxxii., 297; abs. Arch. Derm. and Syph., 1921, iv., 834.
4. McGlasson, I. L.: Arch. Derm. and Syph., 1923, viii., 665.
5. Haldin-Davis, H., and Willis, L.: Brit. Jour. Derm. and Syph., 1925, xxxvii., 364.
6. Campbell, G. G., and Burgess, J. F.: Ibid., 1927, xxxix., 187.

A "UNIVERSITY WARD" AT NOTTINGHAM.—Seven beds in Nottingham General Hospital have already been endowed with money raised by the students of the city's University College, and progress is being made towards the provision of an eighth. The students are ambitious of eventually endowing a complete ward of 20 beds, and it has been arranged that it shall be called "University Ward." The hospital has now received £20,000 on account of this year's Hospital Saturday Fund.

Clinical and Laboratory Notes.

THE ISOLATION OF *BRUCELLA ABORTUS* FROM A CASE OF UNDULANT FEVER.

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Dalrymple-Champneys [1] has collected records of 14 well-authenticated cases of undulant fever originating in England. Recently another case has been reported by Bloxsome and Davey.[2] The diagnosis of these cases has rested on the agglutination of *Brucella abortus* by the patient's serum. The following case is remarkable for the isolation of *Br. abortus* in pure culture from the blood.

Clinical Report by Mr. NIGHTINGALE.

The patient, Mrs. B., came under notice first on May 26th, 1929, with slight pyrexia of about 100–101° F. No symptoms beyond a little malaise were complained of. Between April 17th and May 6th she had spent a holiday on the continent, visiting Belgium, Germany, Austria, and Switzerland, the last week being spent in Switzerland.

In view of our ignorance of the incubation period of this disease it is impossible to say whether she contracted her infection abroad or shortly after her return to this country. There is likewise no evidence to indicate how infection occurred; she dislikes raw milk, and takes it only in tea or coffee.

Throughout the whole pyrexial period, lasting for some 13 weeks, there was a striking absence of symptoms and physical signs. The patient never looked ill and lost neither weight nor colour. The pulse-rate never rose above 70–80. When the temperature was at its greatest height she had a feeling of nausea and a great distaste for food, but beyond that there was nothing to note. There was no sweating and no pain.

The blood was tested for a Widal reaction early in the illness and proved negative. On July 12th a sample was sent to Dr. Knyvett Gordon at the Virol Laboratories, and he reported it as giving a negative Widal reaction to all the typhoid-paratyphoid group but as agglutinating *Br. abortus* in a dilution of 1/400. A further test on July 24th made by Dr. Wilson gave agglutination to *Br. abortus* in a dilution of 1/1280. Recovery, though tedious and slow, was complete, and the patient at the end of October was in full normal health. It may be said briefly that no form of medicinal treatment seemed to have the slightest effect on the course of the illness.

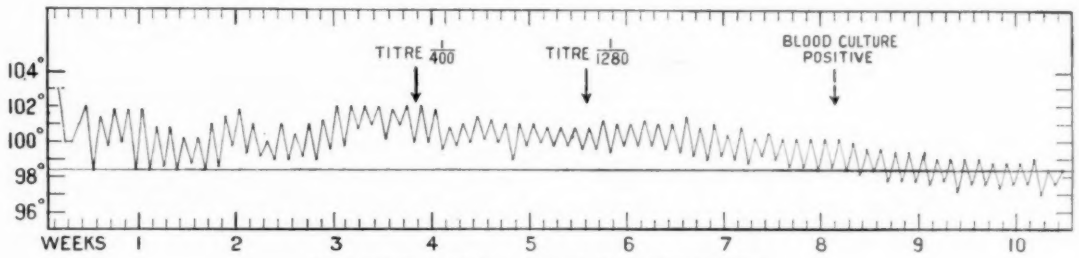
The accompanying chart, which was not commenced for three weeks after the onset of the illness, illustrates the undulant character of the fever, and the very gradual fall to normal.

Bacteriological Report by Dr. WILSON.

The patient's blood was collected on August 11th at about the beginning of the twelfth week of illness; 6 c.cm. were taken by Mr. Nightingale into a tube of glucose broth which was sealed with a special rubber cap and despatched by post.

On the next day the blood-broth mixture was distributed as follows: (1) 1 c.cm. into flask A, containing 50 c.cm. of Huddleson's liver extract[3] broth, pH 6·6; (2) 5 c.cm. into flask B, containing the same medium; and (3) 5 c.cm. into flask C, containing 500 c.cm. of glycerol broth, pH 7·2. The three flasks were put in a modified McIntosh and Fildes's jar, and 5 per cent. of the air in the jar was replaced by CO_2 from a cylinder. After incubation at 37° C. for four days the cultures were inoculated on to agar and glycerol agar slopes, which were incubated in 5 per cent. CO_2. As no growth occurred after five days these subcultures were discarded. A second series of subcultures were made from the flasks on the seventh day, using agar slopes only; one set of slopes were incubated in 5 per cent. CO_2, and one set were fitted with paraffined corks.

Two days later the agar slopes inoculated from flasks A and B, and incubated in 5 per cent. CO_2, showed discrete, circular, convex, translucent, greyish-yellow colonies, having a diameter of 0·2–1·5 mm. Microscopically these consisted of small Gram-negative cocco-bacilli, 0·8–1·3 μ long and 0·4 μ broad. Similar colonies appeared after five days in the sealed tubes inoculated from flasks A and B. The tubes inoculated from flask C remained permanently sterile; but in a third series of subcultures on to agar slopes, made after the flasks had been incubated for nine days, growth was obtained from all three flasks.



Temperature chart in a case of *Br. abortus* infection.

The organism that was recovered from the patient's blood was identified as *Br. abortus* for the following reasons. Besides having the typical morphological and colonial characters of this organism, it failed to ferment any of the usual sugars, it rendered litmus milk alkaline, it produced a small amount of ammonia from peptone water, and it blackened lead acetate medium in three days. For the first two or three subcultures it refused to grow aerobically, though it grew in sealed tubes in four or five days, and in 5 per cent. CO_2 in two days. Inoculated intramuscularly or intraperitoneally into guinea-pigs in a dose of about 500–1000 million organisms, it gave rise to no obvious illness; when the animals were killed after four to eight weeks the spleen was slightly enlarged and was covered with tiny greyish gelatinous nodules, projecting slightly or not at all above the surface; in two animals inoculated intramuscularly into the thigh the sublumbar glands were slightly enlarged; in the animal inoculated intraperitoneally two or three mesenteric glands were enlarged, and the testes were acutely congested. A serum prepared against the patient's strain agglutinated to titre a number of *Br. abortus* strains that were recovered from milk in this country by Wilson and Nutt in 1926.[4] Cross-absorption tests put up between the patient's strain and one of the bovine strains, using the sera prepared against these two strains, showed that both organisms were able to remove all agglutinins from both sera.

Four strains, reputed to be *Br. melitensis*, were available for testing; of these only two could be regarded with certainty as belonging to this species. Neither of these two known strains, nor a third strain, whose history was unknown, were agglutinated to titre by the patient's serum, nor were they able to absorb completely the agglutinins from this

[1] Dalrymple-Champneys, W.: Report on Public Health and Medical Subjects, No. 56. H.M. Stationery Office. 1929.

[2] Bloxsome, H. E., and Davey, E. N.: THE LANCET, Oct. 19th, p. 818.

[3] Huddleson, I. F., Hasley, D. E., and Torrey, J. P.: Jour. Infect. Dis., 1927, xl., 352.

[4] Wilson, G. S., and Nutt, M. M.: Jour. Path. and Bact., 1926, xxix., 141.

serum. The fourth strain, whose history was unknown, appeared to be antigenically identical with the patient's organism. A strain of *Br. abortus* of porcine origin, tested against the patient's serum, was agglutinated to only ¼ titre, and was unable to remove more than about 75 per cent. of the agglutinins.

It appears, therefore, from its morphological, metabolic, and serological properties that the organism isolated from the patient belonged to the species *Br. abortus* rather than to the species *Br. melitensis*, and from its serological properties that it conformed to the bovine rather than to the porcine type of *Br. abortus*.

THE IMPORTANCE OF TRANSFUSION IN THE TREATMENT OF PERNICIOUS ANÆMIA.

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THE introduction of liver therapy has entirely altered the outlook in pernicious anæmia, and the great majority of cases make a satisfactory recovery. In a considerable number, however, liver therapy fails or death occurs before liver therapy could reasonably be expected to succeed. In such cases transfusion of blood may be of the utmost service, either in giving a stimulus to the bone-marrow that liver alone appears to be unable to give, or in keeping the patient alive until response to liver treatment occurs.

We subjoin notes of cases which illustrate these points, and call special attention to Case 1, in which a second transfusion seemed to save the patient's life after a single transfusion and intensive liver therapy had failed and the outlook seemed hopeless. Case 2 illustrates a further point which we have frequently noted in the treatment of pernicious anæmia. That is the hitch in progress which often occurs when the percentage of hæmoglobin has reached a figure in the neighbourhood of 60. This difficulty is surmounted by a temporary massive dosage of liver and liver extract, and some ingenuity may be required in making the requisite quantity of extract acceptable to the patient. In this connexion some of the liver extracts on the market are useless.

CASE 1.—Male, aged 55, gunpowder worker, was first seen as an out-patient on May 30th, 1929, complaining of breathlessness, weakness, and a sensation of numbness of the fingers of seven months' duration. He gave a history of glossitis five months before the onset of his present complaint. He was thin and had a distinct lemon-yellow tint in the skin. His pulse-rate was 96 and his blood pressure 100; hæmic murmurs were audible. Appetite was poor and a test-meal showed entire absence of free hydrochloric acid, and a profuse growth of streptococci was obtained from the meal. No lesion of the nervous system could be detected. Blood examination revealed changes typical of pernicious anæmia, a striking feature being anisocytosis. He was sent home to be treated by his own doctor and ordered half a pound of liver a day.

The patient was seen again on June 11th, 1929, obviously much worse, and was admitted to hospital. The pallor of his lips and conjunctivæ and the lemon-yellow tint in the skin were very pronounced. Examination of the blood showed 1·15 million red corpuscles with 23 per cent. of hæmoglobin and reticulocytes 1 per cent. He was put on a dose of liver extract equivalent to 1 lb. of liver daily, but gauged by enumeration of reticulocytes there was no response, and on June 19th the red corpuscles had fallen to 0·89 million with hæmoglobin 15 per cent. and reticulocytes 1 to 2 per cent.

It was decided to transfuse him. The donor was the patient's nephew and the citrate method was employed. One pint of blood and one pint of saline were given. The patient had a slight rigor 1½ hours later with a maximum temperature of 100° F. During the next few days he suffered from gastro-enteritis and it was impossible to get him to take his full dose of liver extract. He steadily became worse. The reticulocyte count never exceeded 2 per cent. and the hæmoglobin fell to 12 per cent. on the 24th.

At this stage it was decided to transfuse him again. The same donor, the same method, and the same amount of blood and saline were used. One hour after the transfusion the patient had a severe rigor and the temperature reached 104°. On examining a film the day after transfusion the most striking feature was an invasion of nucleated reds, a feature which had been entirely absent up to this point. The reticulocytes rose steadily from 1–2 per cent. on the day of transfusion to 44 per cent. on June 28th, and then fell again to 2 per cent. on July 6th. The patient improved from the date of the second transfusion on extract equal to 1 lb. of liver per day. The following table shows the blood counts at different stages.

Date in 1929.	Red corpuscles in millions.	Hæmoglobin percentage.	Colour-Index.	Leucocytes in thousands.	Reticulocytes per cent.	Notes.
May 30th.	1·64	35	1·1	2·8	—	Out-patient.
June 11th.	1·15	23	1·0	2·6	1–2	Admitted.
,, 19th.	0·89	15	0·9	—	1–2	Transfused.
,, 21th.	0·52	12	1·2	—	1–2	,,
,, 26th.	0·75	18	1·2	—	10	—
,, 28th.	1·075	21	1·0	—	44	—
July 6th.	2·15	35	0·83	2·8	2	—
,, 25th.	3·35	56	0·9	3·0	—	—
Aug. 26th.	4·8	90	0·9	6·2	—	Discharged.
Sept. 25th.	4·9	98	1·0	7·8	—	Out-patient.

CASE 2.—A married woman of 37 was admitted on June 19th, 1929, with a history of progressive anæmia with intermittent attacks of metrorrhagia and gastro-enteritis. On admission she was unconscious, with a heart-rate of 130, an imperceptible pulse, and a blood pressure too low to record. Blood examination revealed: red corpuscles 355,000, hæmoglobin 8 per cent., colour-index 1·14, leucocytes 1200, reticulocytes nil. She was immediately transfused. The citrate method was employed and two and three-quarter hours were occupied in passing one pint of blood and a pint of saline into the vein. During the transfusion she recovered consciousness and was able to talk in a confused manner. From the day of her transfusion she received liver extract equivalent to half a pound daily and steadily improved. The table shows the blood counts at various stages.

Date in 1929.	Red corpuscles in millions.	Hæmoglobin per cent.	Colour-index.	Leucocytes in thousands	Reticulocytes per cent.
June 19th.	0·355	8	1·14	1·2	Nil*
,, 22nd.	0·67	12	1·0	1·4	1–2
,, 25th.	1·04	18	0·9	2·0	36
July 3rd.	1·86	32	0·9	—	5–6
,, 7th.	2·025	36	0·9	3·6	1
,, 22nd.	3·36	62	0·9	—	0·5
Aug. 2nd.	—	62	—	—	—
,, 5th.	4·2	75	0·9	—	—
,, 19th.	4·51	82	0·9	—	—

* Transfused.

The interesting feature is the fact that progress was arrested with the hæmoglobin at 62 per cent. When this occurred the dose of extract was doubled and raw liver added to the diet, after which the patient resumed her steady improvement and was discharged on August 19th, 1929, with 82 per cent. hæmoglobin.

CASE 3.—A married lady, aged 28, was seen by one of us in consultation with Dr. Fergus Hewat. She had become anæmic in the late stages of pregnancy and there was excessive bleeding at her confinement and some bleeding continued. The anæmia increased, and when seen three months later she was yellow, dyspnœic, distressed, and almost inarticulate. The red corpuscles numbered only 0·45 million. Megaloblasts were fairly numerous. The leucocytes were increase and included a few myelocytes. The diagnosis was pernicious anæmia complicated by hæmorrhage. As the condition seemed desperate an immediate transfusion was decided upon, and this was carried out by Mr. J. M. Graham. The result was most gratifying. Next day the anxiety and dyspnœa had gone and the patient was able to take liver extract. Films made four days after transfusion showed a remarkable picture of megaloblasts, many in mitosis, and some normoblasts with budding nuclei. For the last blood

count we are indebted to Dr. Hewat, who tells us that the patient made a complete recovery.

Date in 1929.	Red corpuscles in millions.	Hæmoglobin per cent.	Colour-index.	Leucocytes in thousands	Reticulocytes per cent.
May 23rd.	0·45	15	1·8	18	2
,, 27th.	1·39	28	1·08	16	20
June 24th.	4·1	82	1·0	—	—

Summary.

(1) Cases are recorded illustrating the importance of transfusion and, if necessary, of repeated transfusion in the severest examples of pernicious anæmia. (2) Progress in pernicious anæmia under liver therapy is often interrupted when the hæmoglobin percentage is in the neighbourhood of 60. This interruption may be tedious but can be overcome by massive doses of liver and liver extract. (3) It is important that only liver extracts of known activity should be used.

Medical Societies.

TUBERCULOSIS ASSOCIATION.

AT a meeting of this Association held at the British Institute of Radiology, Welbeck-street, W., on Nov. 15th, a discussion took place on the ætiology and treatment of

SEROUS EFFUSION IN ARTIFICIAL PNEUMOTHORAX.

Dr. W. STOBIE, opening the discussion on ætiology, said that the question presented many intricate problems, for the final elucidation of which a good deal more experience than he himself possessed was necessary, especially on the laboratory side. He had tackled the question from two aspects: from the point of view of the literature, and from his own personal experience. Many causes were adduced for the occurrence of serous effusion in artificial pneumothorax—the local anæsthetic, the cold air, too rapid filling, irritation of the gas, too much gas, pressure on the pulmonary vessels at the root of the lung, intercurrent affections, the introduction of minute portions of the tissues through which the needle has passed, over-exertion, menstruation, stage of the disease, injury of the visceral pleura, separation of adhesions, and so on. It was generally agreed, however, that age, sex, type of disease, or even the resistance of the patient, had little or nothing to do with the onset of an effusion. The speaker was convinced that the frequency of this complication was much greater than was generally believed, and was probably in the neighbourhood of 50 per cent. Many of these effusions could not be diagnosed without the help of the X rays. They should be on the lookout for a possible effusion when a slowing was noticed in the usual rate of absorption, or when on the manometer an unusually quick return occurred to the positive side. Among exponents of artificial pneumothorax there were extremely wide variations in technique, but there did appear to be one common factor—the separation of the pleural surfaces by the inflowing gas, whatever it might be. Moreover, in looking through a recent series of cases of his own, the one outstanding feature in those where fluid had developed was the presence of adhesions, generally in the upper part of the lung. It was more than likely that these adhesions were, as Dr. Gloyne had suggested, disease-bearing surfaces, which, undisturbed, were doing Nature's work of limiting the disease. Once they were stretched they were involved in the complication of hydrothorax. The stretching resulted as a rule from a combination of two closely allied forces—too large a volume of gas at too long an interval, especially a rapid jump from—e.g., 600 c.cm. to 1000 c.cm. after the lapse of several weeks. It was well to remind themselves from time to time that the original procedure in artificial pneumothorax was collapse of the lung and not compression—two very different things. The speaker also drew attention to the frequency with which fresh signs in the better lung or pleura had preceded the appearance of an effusion. Another point brought out was that the complication of serous effusion was more apt to occur in out-patients, who, freed from close medical care, were apt to take undue liberties in various directions.

The pathological examination of the fluid should theoretically give a good deal of help in determining the cause of an effusion in any given case. For example, where there was obvious extension of the disease the hydrothorax should be of the nature of an inflammatory exudate; while in the case of the compression of the vessels at the root of the lung the effusion should be of the passive transudate variety. The speaker hoped that in view of the importance of this side of the problem other speakers more competent to discuss it than himself would take it up.

Treatment.

Dr. F. G. CHANDLER followed with a paper on the treatment of pleural effusion in artificial pneumothorax. He pointed out that his remarks referred only to effusions of considerable size, since a small one, discoverable only by screening or a splash, he would always leave alone, unless there were some special reason for replacing it. Aspiration repeated two or three times frequently appeared to make the effusion thicken and become yellow. Moreover, even after the lung had been compressed for a long time by fluid it would re-expand, though it would often be smaller than formerly. The special reasons for interference included, in the speaker's opinion, the following:—

(1) If the effusion appeared to be producing a fever, after sufficient time had been allowed to give the pleurisy causing the effusion a chance of settling down.

(2) If in a case of moderate but progressive disease there was a fear, with a long-standing effusion, that the pleura would become so much thickened that the lung would never re-expand.

(3) If the effusion increased to such an extent that radiological control of the collapsed lung was no longer possible.

(4) If obliterative pleurisy was threatening.

(5) If a tuberculous empyema began to form, as evidenced by a thickening of the fluid and the appearance of large numbers of tubercle bacilli.

In group (4) replacement, though it might be tried, would probably prove ineffective and oil replacement should be undertaken. A complete oleothorax would not be necessary if the disease were in the upper part of the lung, for as the obliteration of the pleura proceeded from below upwards, the oil was driven to the upper part of the thorax where it was wanted. The oil generally used by the speaker was olive oil containing 5 per cent. gomenol, although for greater permanence liquid paraffin might be used. The amount of oil injected at a sitting varied from 5 or 10 c.cm. in cases of recent effusion up to two pints in cases where the fluid had been present for some time. Patients appeared to like an oleothorax and to be quite unconscious of the presence of the oil. Cases of tuberculous empyema were also best treated by replacement by antiseptic oil.

Discussion.

Dr. L. S. T. BURRELL said that effusion was most uncommon in artificial pneumothorax for any case but tuberculosis. For example, effusion was practically unknown in abscess of the lung or bronchiectasis. The fluid was therefore a true tuberculous effusion, and was not caused by hot air, cold air, or factors of this kind. Practically every

tuberculous patient was found post mortem to have adhesions, due to a previous pleurisy, and on theoretic grounds, therefore, they would expect to find pleural effusion in an overwhelming number of tuberculous cases. There were two groups of spontaneous pneumothorax cases: one of these cleared up quickly without the formation of effusions; the second group was complicated by fluid. These last were probably tuberculous. Dr. Burrell went on to discuss why one of the earliest sounds of fluid in the chest should be a metallic tinkle. Pressure at first was not raised, but on the introduction of a little gas it was raised. When fluid appeared in a case of artificial pneumothorax, a lung previously partly collapsed became completely collapsed. This was probably due to the fact that in the recumbent posture the fluid squeezed the air out of the cells and the lung did not then so readily re-expand. The presence of fluid was almost always associated with complete collapse of the lung.

Dr. S. R. GLOYNE said that the subpleural lymphatics were practically always infected in tuberculosis, and he suggested that this might account for the occurrence of an effusion and have a bearing upon the difficulty of absorption of the fluid. He thought that they were apt to undervalue the importance of the parietal pleura. Another point brought forward was the possible rôle of saprophytic organisms. It was difficult from a pathologist's point of view to believe that a needle could be inserted fortnightly over a long period without producing some degree of infection. He did not suggest that much harm was necessarily done, but he did think that these organisms might possibly be responsible for a certain amount of effusion, especially in lungs that were already damaged.

Dr. S. VERE PEARSON drew attention to a class of case, difficult to treat, in which the fluid appeared at two, or even three, levels, in different "pools." These cases required careful study by percussion and by stereoscopy, to ascertain which of the pools was of most importance, where it should be tapped, and so on.

Dr. G. MARSHALL suggested that effusions might be caused by trauma, especially in cases in which no local anæsthesia was used. With regard to the production of the coin sound he had found that it never could be produced in the cadaver, owing probably to the absence of tension in the walls.

Dr. G. T. HEBERT, speaking on the frequency of effusions in artificial pneumothorax, said that more than 80 per cent. of his patients probably developed this. In two cases of serous effusion in non-tuberculous patients, both of bronchiectasis, the fluid showed 70 to 80 per cent. of lymphocytes. The coin sound, he said, could be obtained wherever there was a big space and fairly rigid walls.

Another speaker drew attention to the value of infra-red rays in aiding the absorption of pleural effusions.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting on Nov. 14th a note on the

Treatment of Lupus Erythematosus by Bismuth

was read by Dr. R. M. B. MACKENNA. The consensus of opinion, he said, was that this disease was the manifestation of a chronic toxæmia. Three forms were commonly found to-day: the first exhibited erythematous scaly lesions; in the second there were indurated lesions with little scaling or erythema but with horny plugs in the orifices of the sebaceous and sweat glands; whilst the third type showed marked erythema but with few scales. Metallic bismuth and oxychloride of bismuth were, he thought, of equal therapeutic value in the treatment of lupus erythematosus. Intramuscular injections of sodium bismuth thio-glycollate had not yielded better results than those of other preparations. Bismuth given by the mouth and in an ointment basis were not of much value. It was impossible to say how much bismuth any given case would require, or for how long treatment would have to be continued. Of 24 cases treated by intramuscular injections of bismuth since March, 1929, about a quarter were discharged as cured, a quarter would shortly be discharged as cured, and the remaining half were making variable progress. He had no proof that the cases discharged as cured were really cured, and it was possible that bismuth injections might only cause a temporary intermission in the course of the disease; unfortunately he could not give any information about the mode of action of bismuth in lupus erythematosus.

Eruptions due to Fungi.

Dr. ELIZABETH HUNT gave a brief report on some forms of cutaneous eruption due to fungi. The organisms isolated on culture were yeast-like fungi (including red, white and pink cryptococci, monilia, endomyces, torula), and trichophytons, including epidermophytons. It was clinically impossible to distinguish the type of lesion due to the different organisms. Cases occurred, as a rule, as isolated instances in a household and indirect infection seemed most likely responsible. An individual susceptibility of the skin might be inferred, but required investigation. Temporary reduction of Fehling's solution by the urine was sometimes observed in the acute stages. Four clinical types of lesion were described: vesiculo-pustular, erythematous vesicular, irregular scaling patches, and thick scaly patches with fissuring. The common characteristics of these lesions were that they were superficial, localised, circumscribed, very chronic, and very intractable. Dr. Hunt described acute attacks in which the vesiculo-pustular type of lesion predominated. The eruption might be localised, but was often widely distributed or associated with a generalised eruption of lesions of the erythematous and scaly types. In these cases the same organism had been cultured from lesions on scalp, arm, and a nail. This kind of case usually showed a yeast infection. Some of the cases were typical examples of cheiropompholyx, and in these no generalised eruption was observed. Infection of the nail was common in about one-third of the cases. Dr. Hunt emphasised the importance of recognising the nature of these cases where the question of an occupational dermatitis was involved.

PATHOLOGICAL SOCIETY OF MANCHESTER.

AT the opening meeting of the session Mr. GARNETT WRIGHT delivered a presidential address to this Society on the subject of

Linitis Plastica.

He related how he had operated on two cases of this disease. At the time of operation he had considered them to be undoubted cases of cancer of the stomach, and he had done a partial gastrectomy on each case. He was surprised in both cases to get a preliminary pathological report stating that the condition was one of extensive fibrosis chiefly affecting the submucous layer of the stomach with no sign of malignancy. The first patient died shortly after operation and the second died nine months later from secondary growths in the peritoneum. Brinton, said the President, had been the first to give a clear and full description of the disease, which he regarded as an atypical form of cancer in which there was an excess of fibrous tissue strangling the invading epithelial growth. It was possible to demonstrate the carcinomatous nature of the disease by staining the epithelial cells with mucicarmine. Most of the cases that had been followed up had died from carcinomatous metastases.

Prof. SHAW DUNN showed an interesting series of microscopic sections of linitis plastica stained with mucicarmine.

A discussion followed.

Reviews and Notices of Books.

PHARMACOLOGY.

An Introduction to Pharmacology and Therapeutics. By J. A. GUNN, M.D., D.Sc. Edin., M.A. Oxon., Professor of Pharmacology in the University of Oxford and Fellow of Balliol College. London: Humphrey Milford, Oxford University Press. 1929. Pp. 220. 5*s*.

"WERE angels to write books," wrote Oliver Goldsmith, "they would never write folios." Prof. Gunn had this thought in mind when he applied himself to the task of writing his little book. Many writers of text-books, in their desire to make their work exhaustive, become diffuse, or, on the other hand, achieve brevity by compressing into smaller space the contents of the larger books rather than by writing eclectically. Prof. Gunn has skilfully avoided both pitfalls, and in brief compass has set forth a presentation of pharmacology and therapeutics. It is wonderfully complete for an introduction to the subject, and can be warmly recommended to the student.

Applied Pharmacology. Third edition. By A. J. CLARK, *M.C.*, B.A., M.D., F.R.C.P., Professor of Materia Medica and Pharmacology in the University of Edinburgh. London: J. and A. Churchill. 1929. Pp. 529. 15*s*.

IN the preface to the first edition of this book, published in 1923, Prof. Clark stated that his principal aim was to try to bridge the gap between pharmacology and therapeutics, and to demonstrate as clearly as possible the connexion between the two subjects. That there existed a considerable demand for such a book is plain, since a second edition appeared in 1927, and now within two years we have to welcome a third. All the chapters have been revised, and some of them rewritten in the light of the knowledge obtained from recent investigation. Two new chapters have been added, one on the pharmacology of the skin, written in collaboration with Dr. G. H. Percival, and one on inorganic metabolism. The latter deals with the "milieu intérieur" of the body, and discusses the interesting question of water intoxication, which is at present regarded mainly as a laboratory phenomenon, but may have some bearing on the symptomatology of nephritis. The book gives a clear account of the most up-to-date physiological and pharmacological opinions. It gives a summary rather than a critical survey of modern views, and in some sections we would have appreciated a more judgmatical tone from a pharmacologist of such authority. But the book has achieved great popularity in its present form and thoroughly deserves further success.

CEREBRO-SPINAL FLUID IN HEALTH AND DISEASE.

Third edition. By ABRAHAM LEVINSON, B.S., M.D., Associate in Pediatrics, Northwestern University Medical School; Attending Pediatrician, Children's Hospital of the Cork County Hospital, Chicago. London: Henry Kimpton. 1929. Pp. 386. 35*s*.

THE fact that this edition is enlarged by more than 100 pages is an index both of the growth of our knowledge of the cerebro-spinal fluid since 1923 and of the author's endeavour to incorporate this new knowledge in his book. Among the additions we note particularly a considerable enlargement of the chapter dealing with the characters of the cerebro-spinal fluid in various diseases, and a new chapter on the fluid in infants and children. Additions have also been made to most of the other chapters, notably those on the anatomy of the structures associated with the cerebro-spinal fluid and on methods of examination of cerebro-spinal fluid for diagnostic purposes. Several gaps, however, remain to be filled. For example, there is no mention of the perivascular channels or Virchow-Robin spaces which, according to recent work, contribute largely to the cellular content of the fluid in various forms of encephalitis and myelitis; and although many new tests are described only one method for estimating the total protein and only three of the many colloidal tests are given. The omission of De Thurzo's bicoloured mastic and benzoin reactions, which are a distinct improvement on the original form of these tests, is a matter for regret. The subject of neurosyphilis merits more than the scant three pages which are devoted to it in this as in previous editions of the book. Apart from these omissions, criticism may be directed to the author's theory of the pathogenesis of the changes which occur in the fluid in diseases other than meningitis. Most of these changes are assumed to be due to "irritation of the meninges," which may be caused by chemical poisons, by the toxins emanating from a focus of encephalitis or brain abscess, or by the pressure of a cerebral tumour. This is one of those apparently simple explanations which become more difficult the more deeply they are probed. It leaves out of account many physical factors, such as venous obstruction and œdema of the brain, which produce changes in the fluid but which have no relation to the meninges. And it gives no help in any attempt that may be made to deduce from the changes in the fluid the nature or situation of the pathological condition which is causing intracranial hypertension.

These defects are, however, balanced by the large amount of information which the book contains in a very readable form, and by the numerous tables which supplement the text, and make the book a convenient work of reference. The bibliographies which follow each chapter are large and detailed and must prove of great assistance to those who wish to inquire more deeply into the many unsolved problems connected with the cerebro-spinal fluid.

THE NERVOUS SYSTEM.

An Introduction to the Study of the Nervous System. By E. E. HEWER, D.Sc., Lecturer in Histology and Assistant Lecturer in Physiology, Women's School of Medicine, London; and G. M. SANDES, M.B., B.S., Demonstrator of Anatomy at the Women's School, and Surgical Registrar at London Lock Hospital for Women. London: William Heinemann, Ltd. 1929. Pp. 104. 21*s*.

THIS book is primarily intended for students, and seems to be admirably fitted for its purpose. The clearness and simplicity of its description, and in particular the excellent grouping of connexions and tracts, will do much to obviate the dissatisfaction which must accompany the learner's search for facts throughout the multiplicity of authoritative works. The subject is treated from the physiological rather than from the anatomical standpoint. There appears to be a disposition on the part of the authors to send more traffic across the dorsal commissural bridge of the cord than it was built to carry. Whether this suspicion is well founded or not, however, makes no difference to our keen appreciation of the book. It is well produced, clearly printed, and illustrated by many good diagrams of the physiological type.

NUTRITION OF HEALTHY AND SICK INFANTS AND CHILDREN.

Second edition. By E. NOBEL, C. PIRQUET, and R. WAGNER. Translated by BENJAMIN M. GASUL, B.S., M.D. Philadelphia: F. A. Davis Company. 1929. Pp. 243. $3.50.

IN reviewing the second edition of this work last year we paid tribute to its originality and thoroughness, while expressing doubt as to whether the Pirquet system of nutrition was destined to penetrate beyond academic circles in other countries. In the meantime it has received some further measure of attention as a result of the tragic death of its originator, and the recognition throughout the world of his

great services to pædiatrics. Dr. Gasul has now placed this work, originally published by Dr. Nobel, within the reach of all English-speaking readers, and we feel sure that his labour will be justified by the number of doctors who will find interest in its pages. Certain facts remain as a bar to the adoption of Pirquet's system in England and in America. First, one of the ideas which underlies Pirquet's hypothesis—that the balance of fat and carbohydrate is unimportant—is not in accordance with current opinion. Secondly, the fear, probably well founded, that the adoption of a far more complicated method of calculation would lead to diminished practical efficiency will deter teachers from advocating the general use of this system, much though they may find in it to admire. Nevertheless, those who are interested in nutrition, and in the treatment of alimentary disorders, cannot neglect the school of thought exemplified in this work, and will find in the arguments set out much common sense.

SURGICAL TREATMENT OF PULMONARY TUBERCULOSIS.

Was muss der Praktische Arzt von der Chirurgischen Behandlung der Lungentuberkulose Wissen? By Dr. HANNS ALEXANDER. Munich: J. F. Lehmanns. 1929. Pp. 60. M.3.

THIS monograph, which is one of a series issued by the *Münchener Medizinische Wochenschrift*, gives a clear and concise account of the modern surgical methods of dealing with pulmonary tuberculosis. It is designed to help the practical physician who is not an expert in tuberculosis. There is a fairly full description of artificial pneumothorax with an account of the technique and complications, and a discussion on the types of case. Bilateral collapse therapy is given but little space. The operations of thoracoplasty and phrenic evulsion are described at some length; the combination of phrenic evulsion and artificial pneumothorax treatment is briefly noticed, as is the older operation of pneumolysis with paraffin wax. In all cases indications for particular forms of treatment advocated are clearly given. Numerous illustrations are included. Amongst these are four very instructive radiograms showing the after-results of spontaneous healing with retraction, and the good results after phrenic evulsion, artificial pneumothorax, and thoracoplasty.

SYMBOLIC PROCESS.

Its Integration in Children. By JOHN F. MARKEY, Research Professor in Sociology at the Connecticut Agricultural College. London: Kegan Paul, Trench, Trübner and Co., Ltd. Pp. 177. 10*s.* 6*d.*

THAT the child is the father of the man is amply demonstrated in the most recent approaches in psychology. Prof. Markey's book on the growth and elaboration of symbols in human behaviour—individual and social—is almost entirely expressed in behaviouristic terms and should thus prove attractive to physiologists, particularly neurologists. There is a simplicity in the behaviouristic approach to mental activity and human behaviour which appeals to those who show a single-needed devotion to laboratory technique and a trust in the results that it gives. But behaviourism cannot stand on that alone. It must be subjected to the logical categories inherent in the material with which it deals, and it has selected only part of the material—that is objective data without reference to those facts which are called mental. Prospective reference and persistence with varied efforts—terms we owe to Stout and Lloyd Morgan—enter, we think, into all mental growth, and therefore into the creation of symbols, individual and social. It is equally a matter of doubt whether the theory will survive the devastating criticism of Koffka and others of the Gestalt school of psychology. No discussion of ultimate principles, however, will diminish the practical value of this book. There are chapters on personal symbol formation and the influence of social relations which are altogether admirable, and to all those who engage in the study of the child mind the essay will repay close study for the facts and investigations alone, quite apart from the difficulties in theory which rise like spectres in every chapter.

MAN AND ANIMALS IN THE NEW HEBRIDES.

By J. R. BAKER, M.A., D.Phil. London: George Routledge and Sons, Ltd. 1929. With 43 plates and text-figures. Pp. 200. 12*s.* 6*d.*

THIS is a gay and most interesting account of the author's experiences and observations in the South Seas. Apart from the more purely zoological parts, which are chiefly for specialists, he discusses two subjects of wide interest. Following Rivers, Buxton, and others he has investigated the depopulation which has been so marked a feature of these islands in recent years, and has advanced on the work of his predecessors by getting a good deal of numerical information. He finds a remarkably high proportion of males to females (160 to 100), which is a contributory cause, and the rest he attributes to diseases brought by Europeans and to abortion; he gives no support to Rivers's conclusion that the chief reason for depopulation was the lack of interest in a life which had by white man's government been pruned of its ritual and excitements. The other curiosity is the hermaphrodite (intersex) pigs which are quite common and play a large part in determining the owner's rank in the social scale. Dr. Baker naïvely assures us (p. 39) that his qualification for dealing with such subjects as depopulation is "a thorough education in biology and scientific method," which is perhaps why he says (p. 115) that all snails are hermaphrodite!

DENTAL INFECTION AND SYSTEMIC DISEASE.

By RUSSELL L. HADEN, M.A., M.D., Professor of Experimental Medicine, University of Kansas. Philadelphia: Lea and Febiger. Pp. 165. $2.25.

MUCH has been written on the subject of dental infection and systemic disease but comparatively little of it has dealt with the experimental side, while this book is mainly concerned with the experimental basis for the theory of dental focal infection as a factor in general disease. Dr. Haden reviews the subject in a moderate spirit, and records the results of his own extensive experiments with critical judgment. An important feature of the work is the correlation of the radiographical, histological, and bacteriological aspects of dental infection whereby Dr. Haden succeeds in conveying an all-round conception of dental sepsis and its sequelæ. He uses the bacteriological technique advised by E. C. Rosenow and has succeeded in confirming Rosenow's experimental findings on elective localisation. These results have been much debated and most bacteriologists regard elective localisation as still unproven. Dr. Haden states that failure to produce Rosenow's results is due to a disregard of certain fundamental technical details, especially a correct oxygen tension and the use of special culture media. The comparison made between the bacteriological findings in cases of infected teeth with positive radiographic changes on the one hand, and pulpless teeth with negative radiographic evidence on the other, is interesting. Quantitative cultures show that a high percentage of the teeth in the last-named group are heavily infected, although the radiograms may show no evidence of bone changes. The last part of the book consists of 35 case reports illustrating various forms of systemic infection associated with dental sepsis. In all cases the diagnosis was based on careful bacteriological examination followed by animal inoculation. They form a group the more striking because all the data available have been carefully evaluated. We recommend this book both to doctors and dentists.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 30, 1929.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND: THE POSITION OF MEMBERS.

WE notice in another column the occurrence of the annual meeting of the Fellows and Members of the Royal College of Surgeons of England which was held on Nov. 21st; the spirit and temper of the meeting was such as to encourage the hope that a reform, which has been pressed for in the columns of THE LANCET for over 80 years, may come up for serious consideration by the authorities of the College. In the early days of THE LANCET the frequent text of editorial articles was the existence of certain abuses in the College, and when the Charter of 1843 was obtained, changing the name of the College to its present style and instituting the order of Fellows, criticism was not abated, although some of its earlier grounds were removed by the new Act. For it was perceived that, although the new Charter had abolished the absurdity in a progressive and scientific calling of a small and self-elected governing body who could hold, and who alone could hold, perhaps for life, the examinerships designed to be the tests of proficiency among their juniors—although this vestigial trait of a trading corporation had now disappeared from the constitution of the College, there remained an illiberal provision, depriving the mass of the corporation from any voice in the conduct of their affairs. The officers of the College under the new Charter were, under altered titles, the same authorities as those who had previously been in power, and to them the discretion was given of selecting the first body of Fellows. It is true that it was provided that no more persons, after the lapse of one year, should be elected Fellows except after examination, but the examinerships remained in the hands of legitimate descendants of the old Governors, while the new rulers were only to be chosen by the vote of the Fellows and from out their own body. Granted that the senile examiner no longer inquired into the proficiency of the new recruits, still the new Council represented the old Court of Assistants, and the new Council selected the first body of Fellows, and the Charter gave to the Fellows, and to the Fellows only, the right of filling up vacancies in the Council as they occurred. The Charter invited criticism, and has obtained it since its birth.

Now it is a remarkable testimony to the way in which the affairs of the College have been managed since 1843 that, although the weakness of the constitution has been pointed out with reiteration, and although from time to time individual and group remonstrances have been addressed to the rulers and voiced in the medical and lay press, nobody has been found to say that the affairs of the College have been badly managed or that the Council has been other than a competent and representative group of men, true and just in their dealings. So much is this the case that successive Presidents have been able to point out, when challenged, that the reluctance of the Council to secure for the Members a place in the management of College affairs has been due to lack of evidence that either the conduct of the College or the status of the Members has been injured by the provision of the Charter leaving the election of the Council in the hands of the Fellows. But it is one thing to say that an institution has not suffered through a loss of something and another thing to say that that institution would not have gained under modification. The College authorities have certainly been open to the accusation of self-satisfaction in taking no steps to consider what measure could be taken, within the provisions of the appropriate Act, to give to the Members an adequate expression of their desire to play their part in the activities, policy and development of the College. It may be said that at one time the Council has been asked to consider the extending of voting powers for seats upon the Council to the Members, and at another to arrange that a certain proportion of Members should have seats upon the Council; and that the two things not being the same no regulations of a reforming character would provide for both. But the difficulty has been pointed out many times, and could be removed at a meeting between the College and properly accredited leaders of reform, the one side saying exactly what they wanted, and the other what could be granted without the hideous task of securing a new Act of Parliament.

Alike because surgery is so living a thing and because the bulk of English practitioners are Members of the Royal College of Surgeons of England, it seems right that this question should receive serious attention with a view to settlement. In past times various Presidents of the College have had no difficulty whatever in refusing to listen to the claims of the Members, because sometimes those claims were put forward in a manner entirely prejudicial to those who were making them, and because on other occasions the vaunted support of numbers could not be proved. But to-day things are altered, for one of the main reasons for instituting an order of Fellows is disappearing. It was the abuse of the senile examiner that led to the institution within the College of an order of higher academic position, designed to form the material whence a court of examiners could be chosen, whose equipment should be level to the progress of their science. To-day this argument has no force, when all degree- and diploma-granting bodies have to choose examiners who have no internal connexion with the particular university or corporation, but who possess the paramount claim of familiarity with their subjects. With the disappearance of this argument for maintaining a deep gulf of distinction between the Fellows and the Members, the road to rapprochement becomes plainer. Frankly we wish that some overt move towards that road could be taken.

SUSCEPTIBILITY TO CANCER.

ALL who are interested in the cancer problem will welcome an authoritative statement on the present state of this problem which appears in the Twenty-seventh Annual Report of the Imperial Cancer Research Fund for 1928–29. In previous years comments on general aspects of cancer research have been included in the Director's Report. It is now intended to make such discussions a special feature of the annual reports, and this year Dr. W. CRAMER supplies a critical commentary on Experimental Carcinogenesis. Here is reviewed, in non-technical language, the work of the last ten years on the experimental production of cancer. Dr. CRAMER points out that some of our fundamental conceptions of cancer have been modified as the results of recent experimental work. Thus the peculiar age incidence

of cancer was formerly interpreted as showing that cancer arises in an organ or in tissues which are senescent. Experimental investigation of carcinogenesis has shown that the development of tar cancer requires a long period of induction. In the mouse the period of induction is hardly ever less than three to four months, but may be much longer—eight to nine months. In man the period of induction can be estimated from cases of occupational cancer; the minimum is seven years, the maximum as high as 20 years. At first sight there seems to be no obvious relationship between the figures for mice and men. But when one considers that the maximal span of life is three years for a mouse and 90–100 years for man, it becomes clear that three months represent approximately the same fraction of its span of life as seven years of human life—an example of a relationship for which Dr. CRAMER suggests the name of biological relativity. This relationship may be found to hold good for many biological processes, which proceed more quickly in the cells of the short-lived animals than in cells of long-lived organisms. That the long period of induction is the correct explanation of the peculiar age incidence of cancer is now fairly generally held by those who have followed recent experimental work on cancer. A conception which is more revolutionary and far-reaching and is likely to meet with some opposition is the doctrine put forward by Dr. CRAMER that susceptibility to cancer is a determining factor in its incidence. The implications involved in this doctrine will be made clear by its comparison with the orthodox view. In a recent rather pessimistic paper Prof. JAMES EWING[1] expresses the opinion that the problem of the ultimate nature of the cancer problem is "one of those types of information which will long escape the human mind." But he regards as one of the most important steps made in the investigation of cancer the recognition of the fact that cancer is not a single disease but a whole host of diseases. "We know," he says, "that there are just about as many clinical entities in the group of cancer as there are outside of them." There exists also a considerable body of knowledge regarding the various forms of chronic and specific irritation which are known to be necessary to the incidence of cancer. The difference between a person who develops cancer and one who remains free from it is that in the former person one organ has been subjected to chronic irritation while the habits and mode of life of the latter have been such as to avoid chronic irritation. On such a conception it is reasonable to expect that the incidence of cancer could be diminished if we traced for each organ the forms of chronic irritations which lead to cancer and, having gained the knowledge, took steps to avoid them.

Dr. CRAMER advances statistical, clinical, and experimental evidence to show that such a view is too simple. The statistical data given in last year's annual report show that the total mortality from cancer in women is approximately the same in different countries, from which statistics of equal re liability are available, although the organ incidence varies greatly. Similarly, the total mortality in men and women of the same country is approximately the same, although the organ incidence necessarily shows considerable differences. If cancer were a whole host of diseases, each organ having a separate ætiology and representing a self-contained unit, the total incidence of cancer would have to be regarded merely as the sum of the incidence in the different individual organs and should increase or decrease as the incidence on this or that organ increases or decreases. The statistical evidence shows that this does not happen, but that some mysterious law of compensation appears to be at work, which provides that whenever in a comparison of two populations there is a markedly lower incidence of cancer in one organ, there is a correspondingly higher incidence of cancer in at least one other organ. This mysterious law of compensation finds an explanation in the fact, which can be demonstrated experimentally and which also appears from the clinical evidence provided by occupational cancer, that the same forms of chronic irritation applied in an approximately equal degree do not produce the same effects in different individuals. In some cancer appears after a relatively short interval, in others after a much longer period, while a third group remains free from cancer. In occupational cancer, for instance, the number of individuals who develop cancer are only a fraction of the number who have been exposed to the specific chronic irritation. Cancer and freedom from cancer are, therefore, not merely a question of presence and absence of chronic irritation. The susceptibility of the organism to respond to chronic irritation with cancerous growth enters as an important factor. It determines the number of people who, as the result of the various forms of chronic irritation incident in our lives, will develop cancer. That approximately the same number of men and of women develop cancer while the organ incidence in the two sexes shows considerable difference is, from this point of view, the expression of an equal susceptibility in the two sexes. Since in women breast and uterus are two organs particularly exposed to chronic irritation, a considerable number of women die as the result of cancer of these two organs and therefore the number of susceptible women who can develop cancer of the other organs are correspondingly diminished, as compared with the number of susceptible men. The argument is closely reasoned and should be carefully studied. It leads naturally to the conclusion that "freedom from cancer is more likely to be attained by diminishing the susceptibility to cancer than by trying to hunt down the various forms of chronic irritation to which we are exposed and devising means to avoid them." Investigations are being carried out to determine, if possible, the factors on which susceptibility depends.

The Director of the Fund, Dr. J. A. MURRAY, F.R.S., in his report summarises the work published from his laboratories in the year under review. The work on the filtrable tumours of the fowl by Dr. A. M. BEGG has been recently reviewed in our columns.[2] Mr. H. G. CRABTREE has continued his studies on the metabolism of cancer cells by applying O. WARBURG'S method to a great variety of strains of transplantable mouse tumours. The result is a confirmation of WARBURG'S discovery that malignant cells possess the faculty of splitting sugar into lactic acid to a far greater extent than normal cells. This property, however, is not specific for malignant cells, so that it cannot be applied as a criterion of malignancy. But since the type of metabolism possessed by cancer cells must determine to some extent their biological behaviour, it is an explanation of some features of malignancy. It would be a mistake to underrate the importance of this discovery because it does not reveal the whole secret of cancer. Of considerable interest is the work of Mr. R. J. LUDFORD, D.Sc., on vital staining of malignant cells. Cells are said to be vitally stained when they are able to take up certain dyes and segregate them in the form of droplets during the lifetime of the animal. The idea underlying Dr. LUDFORD'S investigations is that there is an essential similarity between

[1] Cancer as a Public Health Problem. Public Health Reports, 1929, xliv., 2093.

[2] THE LANCET, Oct. 26th, 1929, p. 886.

the process of vital staining by certain dyes and the chemotherapeutic action of metallic colloids. These colloids, when injected intravenously, are taken up by a certain type of cell, the macrophage, which also has a high capacity for becoming vitally stained. The cells of malignant new growths do not stain vitally to the same extent as their normal prototypes. This raises the interesting question whether the action of metallic colloids is not an indirect one, exercised through the macrophage type of cell. The point is of importance in view of the therapeutic results obtained by means of colloidal lead. Dr. MURRAY, referring to the work of Dr. A. T. TODD of Bristol, who has worked out a modification of the colloidal lead treatment originally introduced by Prof. BLAIR BELL, states that Dr. TODD'S results "prove conclusively the possibility of bringing about the disappearance of some tumours, definitely malignant, with prolongation of life by the intravenous injection of certain colloidal lead preparations." This result could be obtained only in a percentage of the cases to whom this treatment was applied, and in some cases in which regression of the primary tumours took place some of the metastatic growths proved resistant to the action of lead colloid. The evidence indicates that the action of the lead colloid is not a direct toxic one but that a more complicated mechanism is at work.

In recent years the literature of cancer has not been free from a sensationalism unfitting to this grave subject. Observations have been offered on the problems of the treatment and the ætiology of cancer which are based on inadequate evidence. On the other side there has to be fought the sterile pessimism of those who believe the problem to be unsolvable. The annual report of the Imperial Cancer Research Fund always steers a safe course between these two extremes. The difficulties inherent in the problem are admitted; the failures are not concealed; credit is given to successful work done in other laboratories; and the general tenor of the report shows the steady advance in our knowledge which is the reward of patient work.

WHAT SCHOOL-CHILDREN DIE OF.

THERE seems to be a fairly widespread opinion among the laity at the present time that the commonest cause of death among school-children is the motor-car. And indeed, in Sir GEORGE NEWMAN'S report on the Health of the School Child [1] for 1928, violence—presumably most frequently received in street accidents—ranks second only to tuberculosis as a cause of death between the ages of 5 and 15 years. Yet nowhere in the book are preventive measures discussed or recommended; "violence" seems to be regarded by the authorities as an act of God, and is treated with the same respect as that which the ancients accorded to epilepsy. Surely protection of life against this danger is as important as against any other, and should equally be the concern of educational authorities. It is with the prevention of disease, however, and especially infective disease, that the report is especially concerned.

[1] Annual Report of the Chief Medical Officer of the Board of Education. Stationery Office. 1s. The principal causes of death among the children of England and Wales aged 5–15 in the year 1928 are given as:

Disease.	Number of deaths.	Per cent. on total deaths.
1. Tuberculosis	2,173	16·4
2. Violence	1,607	12·1
3. Diphtheria	1,565	11·8
4. Bronchitis, pneumonia, and other respiratory diseases	1,526	11·5
5. Meningitis and nervous system	1,116	8·4
6. Heart disease	822	6·2
7. Measles and whooping-cough	554	4·2
8. Rheumatic fever	513	3·9
9. Appendicitis	472	3·6
10. Acute and chronic nephritis	276	2·1
11. Acute infective osteomyelitis	255	1·9
12. Influenza	237	1·8
13. Scarlet fever	231	1·7
14. Tonsillitis, &c., adenoid vegetations	200	1·5
15. Other conditions	1,733	12·9
	13,280	100·0

Tuberculosis in its various manifestations accounted for 2173, or 16·4 per cent., of the total deaths and remains the chief menace to life among children of school age, but the report includes tables showing the marked decline in this disease since 1907. That variations in conditions and food have an important bearing is indicated by the rise in mortality due to this disease during the four years of the late war. An efficient school medical service is the most valuable factor in obtaining early diagnosis as a preface to thorough preventive and therapeutic measures. Meningitis and other diseases of the nervous system were responsible for 1116, or 8·4 per cent., of the total deaths of the year. The problem of fatal nervous disease following vaccination has attracted considerable attention; in 1928 out of a total of 55 "post-vaccinal nervous diseases" in the whole country, 39 occurred in children between the ages of 5 and 14 years, and of these 19 were fatal. It was pointed out by the Rolleston Committee that this manifestation was extremely rare after revaccination and after vaccination in early infancy. The danger is to the child between 5 and 15 years who has not been previously vaccinated. Measles remains a serious danger to childhood by reason of its complications; much has been done to avoid these by instructing parents in the dangers of the disease, by health visiting, and by the power of the local authorities to provide nursing and medical assistance in epidemics. But the incidence is unaffected by these measures, and is greatest in overcrowded and insanitary slum districts, and among children under 5 years of age. As the mortality is much less among children above this age, the attention of the school authorities at present is directed to postponement of incidence to later ages, to provision of early and adequate nursing treatment, and to early diagnosis of the disease and removal of the infected child. The case-mortality per cent. of diphtheria, since the introduction of antitoxin in 1895, has decreased from 30 to 3 per cent., but, as if partly to balance this enormous gain, the incidence has remained higher during the last nine years than for many years before the war, and in 1928 the disease was responsible for 1565, or 11·8 per cent., of the deaths at school age. Sir GEORGE NEWMAN advises a wider use of the Schick test for determining susceptible individuals; over 90 per cent. of children under 5 years are susceptible, but immunity increases with age. Immunisation has been much improved during the last few years, and three doses of toxoid and antitoxin will now secure complete immunity in 80 to 90 per cent. of children. As the immunity takes a few months to develop the method should not be employed during an epidemic, and 17 local authorities in and around London are offering facilities for immunisation. The immunity lasts for not less than seven years in 95 per cent. of persons. It is obvious what a valuable protection would be offered by a wider use of this preventive measure. The experimental and investigational diphtheria carrier clinic at Guy's Hospital has lately produced its first report. In this the cure of carriers by means of operative

and other treatment is discussed, and the conclusion reached that it is simpler and cheaper to make use of the Schick test and immunisation.

Acute rheumatism and heart disease were between them responsible for 1335, or 10·1 per cent., of the deaths at school age in 1928, and the cardiac complications of rheumatism in its various forms play an important part in disabling children and interfering with school attendance. Perhaps more thought has been given to the care and treatment of the rheumatic child by the educational authorities than to any other type of case, but the only prophylactic measures at present known are general care of the child, healthy surroundings, and, according to Prof. C. W. VINING, "a well-balanced diet from infancy onwards." Dr. JAMES FENTON, medical officer of health for Kensington, in reporting on the first year of the rheumatism scheme in operation there, is of opinion that notification is only of value if it leads to early treatment of cases. The aim in the supervisory centres and clinics is to regulate the life of the child according to its clinical condition. Dr. NAIRN DOBBIE deprecates the exclusion of a child from school without just cause, for with many children school conditions are preferable to those obtaining in the home. Cases may be divided into those which can attend school without restrictions, those which require restriction in the matter of games, those which can receive treatment at school those which require exclusion from school and treatment in the home, and those which require institutional treatment or opportunity for convalescence. These measures should go far to reduce the disabling effects of rheumatic manifestations. Respiratory diseases play a large part in the cause of child mortality, especially under the age of 5 years, and were responsible for as many as 1526, or 11·5 per cent., of the total deaths at school age. Other causes of death are of relatively small account. In 1928 appendicitis was responsible for 3·6 of the total deaths between 5 and 15 years, nephritis for 1·2 per cent., and acute infective osteomyelitis, influenza, scarlet fever, and tonsillitis for percentages ranging between 1·5 and 1·9.

Practically all the principal causes of death among school-children, with the exception of violence and appendicitis, are encouraged by overcrowding, faulty sanitation, unsuitable or insufficient food, and unhygienic surroundings. In short, conditions prevailing in slum districts help to distribute and maintain these disorders. The discovery and use of methods of protection against individual diseases cease to benefit us, and may indeed become a danger, if they encourage us to tolerate conditions which breed disease. Better housing, better sanitation, more accommodation—these are the factors required to reduce the child mortality among us; when these are obtained such valuable measures as vaccination and diphtheria immunisation will take their proper place in the scheme—as our second, not our first line of defence.

RADCLIFFE INFIRMARY, OXFORD.—It is announced that a provisional arrangement has been made by which Sir William Morris, the motor-car manufacturer, will purchase the Radcliffe Observatory and its grounds for £100,000. The Observatory itself is being removed to South Africa, and Sir William will hand over the site to the Radcliffe Infirmary, which is to begin extensions in a few months. Sir William Morris's gifts to the hospital already amount to £80,000, and it will be remembered that among other benefactions he has given £104,000 to St. Thomas's Hospital.

Annotations.

"Ne quid nimis."

THE C.M.B. ON ITSELF.

THE Central Midwives Board has riposted with vigour to the suggestions, contained in the report [1] of the Departmental Committee, that its membership should be reduced and its powers to approve training institutions and teachers should be transferred to the Ministry of Health. The duties of the Board as conferred upon it by the Act of 1902 are, it is pointed out,[2] threefold; they include the framing of rules for the training and registration of midwives and the regulation of their practice, the investigation of misconduct, and the publication of a list of midwives legally entitled to practise. The present constitution of the Board, on which are represented all the bodies especially interested in the education and the work of midwives, is held to have answered its purpose very well since 1921 when it came into force, and any limitation in its membership would result in the interests concerned no longer being properly represented. The Board is at pains to correct the impression that it is in any way responsible for the irregular character of the maternity service throughout the country. Its aim is a comprehensive maternity scheme which will make complete provision for:—

(*a*) Medical examinations during antenatal period.
(*b*) The full services of a certified midwife or, alternatively, a doctor and a midwife acting as a maternity nurse.
(*c*) The services of a doctor when required.
(*d*) The services of a specialist on the doctor's request.
(*e*) Institutional provision for the confinement of abnormal cases, patients with unsuitable home conditions, and also for those who desire such arrangements.
(*f*) Further medical examination six weeks after the confinement.

But whereas local sanitary authorities have abundant powers to set up such schemes, they have few statutory duties, and the Board has never been in a position to compel them to fulfil their public responsibilities. In its observations on the recommendations of the Committee the Board expresses a measure of agreement in principle with many of them. It approves the preliminary examination of the pupil-midwife, the holding of a clinical examination as part of her test, and the requirement of post-examination experience before final certification is approved. It favours training in large institutions and lectures delivered by highly qualified persons to large classes; it has always encouraged post-certificate training, and agrees that when a midwife resumes practice after having retired for a while she should undergo additional training. But the Board does not agree that the rules governing the practice and conduct of the midwife should cease to be statutory, for in that case the midwife could plead ignorance of them and the High Court on appeal would have to consider whether her act or omission was in fact professional misconduct, guilt depending on whether any harm had actually occurred from her neglect. This would, it is believed, be resented by representative midwives, who would hate to become a merely disciplinary tribunal.

But while so much is freely admitted and so much is discussed with reasoned arguments, the Central Midwives Board objects in the strongest possible manner to the transfer to the Ministry of Health of its power of approval of training institutions and teachers. Inspection of training, it holds, is better done by those actually engaged in obstetric practice, and inspection of lecturers and teachers by those whose experience as teachers and examiners has been wide and varied. Supervision and inspection of training schools for midwives is no more within the natural

[1] See THE LANCET, Sept. 28th, pp. 669 and 680 et seq.
[2] Central Midwives Board. Memorandum on the Report of the Departmental Committee on the Training and Employment of Midwives. London: Spottiswoode, Ballantyne and Co. 6*d*. Observations of the Board on the Recommendations of the Committee. Same publisher. 6*d*.

scope of the Ministry of Health than is the supervision and inspection of the medical schools of the country. Control of the teaching should obviously, as is the case with medical education, be entirely in the hands of a thoroughly representative body of experts and not of a Government department. The Board draws attention to the fact that a whole-time inspectorate cannot possibly have such intimate knowledge of actual practice or teaching as must be possessed by those who undertake such highly responsible duties. In the past qualified members of the Board have made an inspection of training institutions wherever special circumstances have made it appear that close inspection was necessary, and the Board never approves training at any institution (other than those large hospitals and lying-in institutions which are so governed that the Board can rely on the governors making adequate training arrangements) without obtaining a statement from the local supervising authority that the appointment of the person who will be responsible for the training is desirable. The knowledge of what goes on in training institutions which is obtained from evidence given at the hearing of penal cases and from information obtained as the result of conducting examinations could hardly be obtained in any other way. The Central Midwives Board doubts very much whether the appointment of an advisory committee as is suggested would achieve the desired result; in view of the criticism that has followed previous creations of such committees by the Ministry of Health surprise is expressed at the recommendation.

TUBERCLE IN HOT COUNTRIES.

IN the civilised countries of the temperate zone we look on tuberculosis as one of the most deadly diseases, and attempts to prevent it are widely encouraged. In hot countries, on the other hand, where it is imagined that tubercle is less prevalent, the prevention of this infection is not taken very seriously. Acute and fatal epidemics are apt to claim all the attention; yet Dr. E. Roesle, of Berlin,[1] finds it all too easy to prove that in tropical and semi-tropical lands the menace of tubercle is just as great, or even greater, than in Europe, though it comes less to notice.

He begins his long and detailed survey in South America, where reliable statistics are available only for the large cities. The figures represent the number of deaths per 10,000 living, and to provide a background Roesle gives the tubercle death-rates for 1921–25 as 13·1 in Germany and 10·8 in England and Wales. In 1926 death-rates from tubercle of all organs in South American towns were: Lima 62·6, Callao 58·5, Valparaiso 58·6, Buenos Aires 18·7, Montevideo (lungs only) 25·1, Rio de Janeiro 25·3. Registration started in Rio in 1859, and in 1860, with a population of 155,000, the general mortality was 700 and the death-rate from tubercle 122. The lists, maps, and charts Roesle has collected concerning South America form a monument of patient toil. As regards India, he quotes a Bengal report to show the mortality from tuberculosis was probably 30, though not so registered. He feels that health commissioners are so anxious about the more acutely fatal epidemics they have no time to see that complete registration of tubercle deaths are made. Even so, tubercle death-rates of 24·4 for Calcutta and 27·0 for Madras are recorded for 1926. Tuberculosis admissions to hospital in the British Army in India in 1925 were 9 per 10,000 (lungs only), and in the native army 31, suggesting a much more serious incidence in the populations from which they come. Similarly, in the Dutch Indies in 1923, admissions in the European Army were 35, and in the native troops 54. He concludes that tubercle is very prevalent among the natives of India, and not decreasing. The true number of deaths will never be known, because many persons who are weakened by tubercle die of the epidemics of the year. Despite its long history of civilisation China cannot answer even simple questions about its population, but the tubercle-rate in Hong-Kong in 1923 was 33. In Shanghai in 1925–27 the rate was stated at 12·4, but 65 per cent. of Chinese prisoners at Shanghai showed signs of tubercle in 1923 or earlier, and Roesle concludes that tubercle is widespread in China. In Japan in 1921–25 the tubercle mortality was reported as 20·5. No recent figures of admissions in the forces are given, but in 1908 the rate was 39·2 in the Japanese Army and 60·3 in the Japanese Navy, whereas in the Prussian Army it was only 14. In the city of Manila the tubercle death-rate was stated as 44·4 in 1913–15 and 56·1 in 1923–27. Here and elsewhere Roesle finds evidence that war and its hardships act selectively against those who are tuberculous, raising their death-rate.

Since nothing is said about Africa by this careful investigator, we may add that in 1911 O. Peiper,[2] an army surgeon with the German native troops in Tanganyika, drew attention to the occurrence of tubercle among natives at the coast, infected by tuberculous Goanese and Indian immigrants, for whose exclusion he begged. He returned to the subject next year,[3] gleaning from official reports that in 1907–08 a native chief had described tuberculosis as a new disease from which people were dying. The natives had no particular name for the syndrome, suggesting that it was of recent origin, and the number of cases from year to year was increasing. In the annual reports of Tanganyika Territory, small-pox, plague, cerebro-spinal fever, sleeping sickness, venereal diseases, and influenza attracted so much attention at first that tubercle does not seem to have been mentioned until 1926 when a medical officer was sent to Moshi (4000 feet above the sea) where cases were found. In 1928 621 cases were noted in this area, and "excellent work" is reported from a sanatorium, but the number of deaths is not given.

The long array of figures collected by Roesle is emphatic evidence of the wide extension of tuberculosis in the hot countries of the world.

[1] Archiv f. Schiffs- u. Tropen-Hygiene, 1929, Suppl. II.

POLLUTION OF RIVERS.

SIXTY years ago the owner of a mill on the Calder used the water of the river as ink when writing to complain to the authorities of its pollution, and though there has been some improvement since then, the whole matter is regarded with too little seriousness to receive proper attention. The difficulties of maintaining a sufficient supply of pure water are great enough to make the loss of any sources by pollution a grave matter, as was shown by the recent drought. Every year fresh industries arise in rural districts, and some streams, previously pure, have been polluted during recent years. Such pollution has two sources—(1) insufficiently treated sewage effluents, (2) trade effluents of various kinds. Mr. J. B. Firth, D.Sc., speaking at the Public Works, Roads and Transport Congress, held last week in London, said that pollution by sewage of the River Trent was a serious factor, especially in the neighbourhood of small towns and in rural districts. The supervision of disposal of sewage rests with some overburdened official such as the district medical officer, or surveyor; the sewage works are often hopelessly inadequate for the quantities of sewage to be treated, and the work is entrusted to some unskilled labourer without scientific supervision. The results are such as might be expected: either the quantity of sewage is so great that the excess is surreptitiously discharged into the river by night, in the crude state, or the measures taken for its purification are inadequate and carelessly carried out. In a relatively large number of cases the sewage works consist of one or two settling tanks and nothing else. As the purification of domestic sewage is not a difficult process, the carelessness of the authorities

[2] Ibid., 1911, Suppl. II., p. 5.
[3] Ibid., 1912, p. 431.

is not an easy matter to excuse. Even in the larger towns the works are often either obsolete or of insufficient capacity; few produce a satisfactory effluent.

The Rivers Pollution Act of 1876 and the Salmon and Fresh Water Fisheries Act of 1923 are either ineffectual or insufficiently applied. The difficulty, of course, is that the treatment of sewage and the prevention of pollution are the responsibilities of the local authorities, and these are frequently in too weak a financial position to carry out the reforms required. In the case of trade effluents the problem is not so straightforward; many manufacturers regard the river as a legitimate outlet for waste products, especially if they made use of it with impunity before the 1923 Act was passed. Others, while prepared to take steps for the purification of the effluent, have been at no pains to discover the most suitable method, and either make use of some inappropriate means, or are content with half measures. Occasionally the manufacturer is ignorant of the damage resulting from his waste products, more especially if these are in the nature of food material, such as beet-sugar or condensed milk. An instance in which this occurred was responsible for considerable damage to fish life; the milk products in the process of decomposition gave rise to various highly toxic substances while at the same time they robbed the water of dissolved oxygen. In a case occurring last July, a farm on the River Gipping became unsaleable, and certain of the stock died as a result of pollution of the stream by an acetate silk factory. The situation becomes intolerable if, in order to encourage industry, such an important essential as unpolluted waterways is to be sacrificed. There is no necessity for this objectionable state of affairs; nearly all trade effluents can be rendered harmless, and most of the rest can be substantially improved by chemical means. It is difficult, however, to enforce these measures when manufacturers are aware of the defective treatment of sewage. It will be remembered that at the summer meeting of the British Medical Association Dr. H. McLean Wilson, chief inspector to the West Riding River Board, advocated the formation of more river boards as the best method of attacking the problem. These can supervise the rivers and their tributaries, paying particular attention to sources of possible pollution. The cost of such boards is comparatively small; that of the West Riding amounted only to a rate of one-seventh of a penny. Whether such organisations would be sufficient to control the nuisance is not quite certain. They could undoubtedly do much by way of detection of pollution and advice on its elimination.

The problem of catchment areas for large towns, and the guarantee of water-supply for new town-planning schemes enlarge the scope of inquiry. Joint committees for town-planning can do much in conjunction with the water authorities to prevent pollution of rivers and underground sources of water which may supply more distant areas. The protection of catchment areas, as in the case of that of Manchester, can be enforced by suitable regulations. Various minor points all play a part in the question of maintaining unpolluted streams. In some cases effluents do harm by being introduced into a relatively stagnant part of the river—that is to say, in the shallows close to the bank. It is essential that an effluent should be introduced where the flow is rapid in order that it may be diluted as quickly as possible. This result can be obtained even more satisfactorily by mixing the effluent with river water prior to its introduction into the stream. Again, it is preferable to provide for the cooling and aeration of effluents before discharging them, more especially if the stream is small and the effluent of considerable volume. Hot non-aerated condenser water can be responsible for serious damage to fish life in a small stream.

To sum up, pollution of streams cannot be excused on the grounds of insufficient investigation of origin or ineptness of corrective measures. The work of those who have interested themselves in the problem all goes to show the entirely unnecessary nature of the evil. "The chief hindrances," said Dr. Firth, "are legislative and administrative." The annual report of the Ministry of Health for 1928–29, though making no proposals for amending the law, admitted that the growth of population and the improved standard of sanitation call for capital expenditure in the treatment of sewage which sanitary authorities may be unable to meet. Clearly the matter cannot be effectively controlled while it rests in the hands of small local authorities.

POST-VACCINAL ENCEPHALITIS.

RECENT figures published in Holland concerning the epidemic of "alastrim" in that country show that 15 deaths occurred among 573 cases. In relation with this outbreak, and between July 28th and Sept. 29th of this year, 8239 primary and 146,787 revaccinations were performed. Among these there were 59 cases of post-vaccinal encephalitis with 15 deaths between the beginning of August and Oct. 5th. Eight children believed to be suffering from this affection were treated by one, two or three intravenous injections of 10 c.cm. each of the serum of adults who had recently been vaccinated. Seven of these patients made a complete recovery. The treatment recalls the successful case published by Sir Thomas Horder in THE LANCET (1929, i., 1301), in which a child received 5 c.cm. of the serum of his mother who was vaccinated at the same time as he was. In this case the serum was given intrathecally, a route which theoretically holds out more hope of success. Netter,[1] in a commentary on the present epidemic of alastrim, is inclined to attribute the post-vaccinal encephalitis to the action of vaccinia alone. He does not, however, bring forward any fresh explanation of the very irregular distribution of the cases in different countries and parts of the same country when the same or very similar vaccine has been used, nor does he show any reason for distinguishing these cases from those following other diseases, such as measles and chicken-pox. He also returns to the hypothesis that passage of vaccine lymph through the rabbit in the process of lymph production is the origin of the cerebral complications, though there is evidence that post-vaccinal encephalitis may occur following the use of lymph which has never passed through the rabbit. A new feature in the Dutch report by Kuenen, Kniper, and von Loghem[2] is the occurrence of 14 cases of post-vaccinal encephalitis following revaccination, an event which was almost unknown previously.[3] Netter urges in support of the essentially vaccinal nature of the disease the experiments by Bijl and Fraenkel, 1929, which suggest that vaccine virus becomes more active after contact in vitro with normal brain tissue, and instances the curative effect of the serum of vaccinated persons. The former experiments do not seem sufficiently cogent to have much importance, but the latter might be significant if they were corroborated by further trial. Generalisation of neurovaccine virus in the rabbit and its propagation with production of lesions in viscera have been described by several workers, especially Douglas, Smith, and Price,[4] and Ledingham and Barratt in our issue of Sept. 7th. The experiments by C. Armstrong and R. D. Lillie[5] who produced pneumonia in rabbits by instilling vaccine lymph into the nares or trachea, provide further evidence of localisation in unwonted organs. In these rabbits the virus increased locally in the lungs, which it presumably reached directly, whereas in post-vaccinal encephalitis in man it has only been recovered from the brain with great difficulty, and is not more constantly present there than in other organs. There is no evidence so far of the production of specific lesions in the central nervous system of rabbits even after the intravenous injection of the most active strains of vaccine.

[1] Bull de l'Acad. de Méd., 1929, cii., 225.
[2] Ned. Tijd. v. Genesk., Oct. 19th, 1929.
[3] See Rep. Vaccination Committee Report, 1928.
[4] Jour. Path. and Bact., 1929, xxxii., 99.
[5] U.S. Public Health Reports, November, 1929, p. 2635.

THE LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE.

THE report for the year ending July 21st, 1929, presented to the Court of Governors on Nov. 27th, is the first report to be issued from the new building which was opened by the Prince of Wales on July 18th. Naturally it records a year of great activity. A division of public health has been inaugurated under the directorship of Prof. W. W. Jameson. It has been staffed on special lines, and its members represent various aspects of public health life and activity. A scheme of study in public health, framed on novel lines, has been drawn up. It is hoped that the scheme will succeed in coördinating the different branches of study into a combined and logical exposition of the whole subject of the public health. A new course has also been drawn up for tropical medicine and hygiene. One feature of the new arrangement in this subject is that the summer course ends before the beginning of July—a "stale" month, and one much occupied with congresses and meetings. The division of epidemiology and vital statistics has moved into the School from the National Institute of Medical Research. The study of experimental epidemics is being continued in conjunction with the division of bacteriology and immunology. An interesting feature of the School's work is the informal instruction given for short periods to medical officers proceeding abroad and the liaison work with other nations. Dr. Andrew Robertson has left the department of protozoology to work with the United Fruit Company of New York, in Tela, Spanish Honduras, and the School has been visited by teachers of tropical medicine from Berlin, Hamburg and Shanghai. A system of library services has been organised to supply information on any branch of the School's work to members of the staff and outside inquirers. The library has been expanding very rapidly, as has also the museum, which contains many interesting exhibits supplied by commercial firms. Research work, as always, plays an important part in the year's activities, and investigators have contributed from all over the world. The appendix gives a list of about a hundred original papers published during the year. One group of research is financed mainly from the Milner Research Fund, and another through the Ministry of Agriculture. Meanwhile the teaching work has continued with success. During the year, 166 students attended courses; they came from the Colonial and Indian Medical Services, the Royal Army Medical Corps, other Government services and missions, and they went to every part of the world, the majority to Africa and India.

The full programme of activities is not yet in operation, and the Governors look forward to an early expansion of the department of biochemistry, the section of applied physiology and the work of the School in relation to industrial hygiene.

COMING OF AGE OF THE TRELOAR HOSPITAL.

Sir William Treloar personally received the first patients at Alton on Sept. 7th, 1908, and the annual report for 1928–29 is therefore the "coming-of-age" report of this institution. It records 21 years of successful work, and declares proudly that few institutions can claim to have done so much for national health and efficiency in so short a time. The success is ascribed to the spirit of personal service inspired by the founder, a spirit which has earned for Alton the name of "The Happy Hospital," and secured a record of 95 per cent. success in treatment. Sir Henry Gauvain, in his medical report, traces the development of the work and the gradual changes in method and technique. Particular attention was first paid to the treatment of abscess and the prevention of sinuses, and next to appliances for the prevention and correction of deformity. Research of all kinds has always been a prominent feature of the work at Alton and has produced results, both positive and negative, which have been of great practical importance. On the whole, conservative treatment is regarded as the treatment of choice, and with it are included such adjuvants as heliotherapy and balneotherapy. The seaside branch at Hayling Island was inaugurated in 1912 to make full use of natural sunlight and natural bathing, and the artificial light department supplements the deficiencies of the climate. Intermittent light treatment has been found more beneficial than continuous exposure, so that the South of England may be held to offer better conditions than districts with continuous sunshine. The more exhausted and toxæmic a child is, the less is the indication for exposure to light, and much harm may follow the irradiation of unsuitable cases. Artificial light at Alton is chiefly used for lupus vulgaris. Where surgical interference is necessary it is supplied by the orthopædic department, which works in conjunction with the Portsmouth public health authorities.

Education has always been an outstanding element of the work at Alton. All children from the age of 2 receive daily instruction, and in intelligence and resourcefulness the sick often outstrip the healthy. Year by year discharged patients return to their schools none the worse educationally for their long absence. Special handiwork classes are a great boon to the dull children, and advanced handicrafts are taught to convalescents who will be too old for school when discharged. An early investigation showed that patients with healed tuberculosis could safely resume normal activities, and the boys at the College are not treated as invalids in any way. The cricket and football teams play on equal terms with village clubs, and secure a very fair average of wins. The College trains crippled lads to earn their own living, and succeeds in 80 per cent. of cases. The boys are taught leather work, bootmaking, and tailoring. Senior boys take a course of bookkeeping, and are prepared for open examinations. The combination of vocational and educational training is of great value, and the report claims that a selfish boy does not exist in Treloar College. It was at Alton, moreover, that it was proved that suitable heliotherapy can evoke an increase of nearly ten per cent. in mental activity.

It is gratifying to learn that financial support has been well maintained. The cost per bed per week is £2 1*s*. 7*d*., and a good deal of rebuilding has become essential, as the buildings conveyed to the institution in 1908 were the old wooden structures of the Princess Louise Military Hospital. For this purpose a rebuilding fund has been opened and a special appeal issued. During the 21 years, to the end of last March, 4871 patients were admitted and 4523 discharged. The average length of stay was 405·2 days, and the total mortality 2·9 per cent. The Alton Hospital has a record of which it may well be proud, and we congratulate it on the attainment of its majority, and trust that it will go on in its maturity from strength to strength.

THE DENTISTS AND THE HAIRDRESSER.

Is the scaling of teeth an operation which amounts to the practice of dentistry, and which therefore cannot be lawfully performed except by a registered dentist? This question was put last week to the stipendiary magistrate at Bow-street, and seemingly was answered in the affirmative. Where an offence is not very grave, magistrates have a wholly praiseworthy habit of refusing to convict, even though satisfied that the prosecution has made out its case; they make the defendant pay something by way of costs rather than by way of penalty. The only disadvantage of this course is that it sometimes prevents the public from getting an authoritative ruling on a nice point of law. The facts in the Bow-street case were clear. A hairdresser in Lamb's Conduit-street had hung up in his saloon a notice saying "Teeth cleaned and scaled." Customers who came in to have their hair cut were invited afterwards

to have their teeth scaled for half-a-crown. A summons was issued at the instance of the Dental Board. On receiving it the hairdresser wrote to the Board that he did no more than clean his customers' teeth with a match-stick and peroxide; this he regarded as beauty culture rather than dentistry. At the police-court he reiterated the contention that he merely cleaned teeth for the purpose of improving the appearance. He kept, he said, no dental instruments on the premises; if a customer had bad teeth requiring attention, he always referred him to a dentist; he was quite unaware that he was doing wrong, and he had now removed the notice from the wall of his saloon. Counsel prosecuting on behalf of the Dental Board had no difficulty in producing a definition of dentistry. Section 14 of the Dentists' Act of 1921 says explicitly that, for the purposes of that Act, the practice of dentistry shall be deemed to include the performance of any such operation and the giving of any such treatment, advice or attendance as is usually performed or given by dentists. Mr. A. T. Pitts, who was called by counsel to give evidence as to the process of scaling teeth, explained that tartar on the teeth was an injurious substance containing a number of germs which might set up pyorrhœa; the removal by scaling was a difficult matter requiring special instruments skilfully handled. This evidence, unrebutted, was presumably conclusive of the fact that the scaling of teeth is an operation usually performed by dentists. The magistrate said he thought the defendant had held himself out as being prepared to practise dentistry, but he dismissed the summons on payment of three guineas costs. It may be noted that the maximum penalty under the Act is a fine of £100. No doubt the magistrate was justified in taking a lenient view. At the same time, the Dental Board has no alternative but to bring such cases before the courts. If teeth-scaling by unqualified persons is to be sandwiched in between a shave and a hair-cut, it may soon become arguable that it is not exclusively a practice of dentistry. The mischiefs at which the Dentists' Act of 1921 was aimed will revive if amateurs are to be allowed to attack tartared teeth, and to decide whether or not the mouth is bad enough to justify reference to a dentist. If Parliament had —as nobody doubts it had—good reasons or conferring on the registered dentist a monopoly of practice which it refuses to the registered medical practitioner, the Dental Board would be false to its trust if it failed in vigilance.

DR. SAMUEL RIDEAL.

Dr. Samuel Rideal, whose death has been announced as occurring recently in South Africa, is well known by name to all chemists and many members of the medical profession as the inventor of the Rideal-Walker coefficient, a convenient method for the ascertainment of the comparative antiseptic power of disinfectant preparations. Dr. Rideal, who was a D.Sc. of London University and a Fellow of University College, was at the beginning of his public career lecturer on chemistry at St. George's Hospital; but he later devoted himself mainly to the study of disinfection problems and those of food preservation, to water purification, and to the chemistry of sewage. On all these subjects he wrote carefully and because of his familiarity with the difficulties of their study, and also because for a time he served as public analyst at Chelsea, he became president of the Society of Public Analysts as well as on different occasions examiner in chemistry at the English Conjoint Board. The Rideal-Walker method, immediately upon the publication of its technique, became commonly employed where it was necessary to compare the germicidal power of any preparation with that of some other disinfectant under carefully standardised conditions. Later, a method of accomplishing the same purpose was designed by the late S. A. Vasey, then chemist to THE LANCET, and this method has been much employed even while it became obvious in certain directions that it was open to criticism. A summary of the position was written in our columns by Rideal, and those who are interested in what at the time was a very live controversy will find the story set out by Rideal in a perfectly impartial way [1] in our pages. Dr. Eric Rideal, Humphrey Owen Jones lecturer in physical chemistry at Cambridge, is a son of the late Dr. Samuel Rideal.

THE ROYAL DENTAL HOSPITAL.

FOR very many years it has been the custom of the Royal Dental Hospital to hold an At Home on the same day as the annual dinner for old students and their friends. On this occasion clinical demonstrations are given by members of the staff, while a large number of interesting cases of rare conditions are collected. This year on Nov. 23rd over 300 former students and their friends attended the hospital. In the morning Mr. S. F. S. Steadman demonstrated the technique of regional anæsthesia; Mr. Bowdler Henry the preparation of the mouth for artificial dentures; and Mr. F. Talbot, the dental surgeon in charge of the newly established electro-therapeutic department, showed some patients under treatment. In the department where children with cleft palates are trained to speak, under the direction of Miss van Thal, several patients chatted to the visitors, and their clear enunciation testified to the value of the teaching. In the afternoon clinical cases were shown, also exhibitions of work in the various departments carried out by the students. Among the cases shown were several of dental and dentigerous cysts, including two examples of a very rare form of the last-named tumour—namely, a cyst arising in connexion with supernumerary teeth. Two cases of diffuse hypertrophy of the maxilla were shown. One patient who attracted some attention was a man of 40, with several unerupted teeth; two sisters of this patient showed a similar condition, and, in addition, defective ossification of the clavicles. The association of cranio-cleido-dysostosis with unerupted teeth as a familial disease has been noted in the literature, but cases are very rare. The orthodontic department was represented by a large number of children showing the results of treatment. The comparison of the original models of the jaws with the present condition of the patients showed how remarkable is the æsthetic improvement which can be obtained, and the boon which treatment can confer on children with unsightly irregular teeth. In the prosthetic department were a number of patients for whom unusual forms of dentures had been made. Obturators designed for cleft palate or to restore the maxilla after extensive operation for malignant disease were shown. The advances in substances available for dentures were illustrated by dentures made of new translucent materials, which reproduce the appearance of the gum in a way not possible with vulcanite. In the radiological department a large number of beautiful radiograms were displayed, and in the pathological department microscopic slides, specimens, and cultures. The John Hampton Hale research department was open to inspection, and visitors manifested especial interest in the investigations by Dr. E. W. Fish into dental caries and the nutrition of enamel and dentine. Many of the past students who visited the hospital in the afternoon reassembled at the Trocadero Restaurant at 7 P.M. to dine together and to greet their guests. Mr. W. J. May, who presided at the dinner, proposed the toast of the past and present students of the hospital and school, commenting on the wealth of clinical material available in the out-patient departments, which hitherto had constituted the whole of the hospital's clinical activities. From January next, however, ten beds would be reserved for Royal Dental Hospital cases at the new annexe of Charing Cross Hospital. Dentistry was not a soft job, but a hard and exacting profession, which nevertheless brought great rewards to its

[1] THE LANCET, 1913, ii., 826.

followers. Mr. E. D. Davis, in response, spoke of the determination shown by the authorities governing the hospital to keep up to date. They were fully conscious that dental surgery in modern times was not confined to the teeth, and that all diseases which had origin in the mouth should be considered in relation to it. The provision of beds and the use of an operation theatre at Charing Cross Hospital would help to show dental students how closely their activities were connected with those of the medical profession. Mr. F. F. V. Mansfield spoke of the revival of the Students' Society, and of the loyalty to the hospital, and the keen desire of the students to be well equipped for their future work. In two directions greater facilities were desirable; some of the students left the hospital without ever having extracted a deciduous tooth, and others had had little or no experience in giving gas. Mr. H. Stobie, the dean, spoke of the academic successes achieved. The examination results taken all round showed 70 per cent. of passes. A department of electro-therapeutics had recently been installed, and research work was in progress in all departments. Full advantage was taken of the facilities provided for post-graduate work. The Dean regretted the resignation from the staff of the honorary anæsthetists, Dr. Harvey Hilliard, Dr. C. J. Loosely, and Dr. E. H. Drinkwater, and announced that Dr. Lionel Smith, Dr. R. G. Karn, and Dr. F. P. de Caux had been appointed to succeed them. After a pleasant interlude of light music, supplied by Dr. Karn, the speeches were resumed. Mr. S. A. Riddett proposed the visitors in graceful terms, and Mr. W. Malcolm Scott, in reply, expressed concern at the diminished number of entries into the dental profession, in view of the possibility that dental benefit under the approved societies would become statutory. Mr. A. T. Pitts, in proposing the health of the chairman, recalled his own student days when Mr. May was a popular member of the honorary staff, always accessible and helpful to the students. Visitors to both the functions organised by the hospital on Nov. 23rd must inevitably have carried away the impression that this dental school is alive to its responsibilities, not only to students but to the general public, and is fulfilling them with zeal and success.

POST-OPERATIVE TETANUS.

IT has long been recognised that the germination and development of spores of *B. tetani* which have gained access to the tissues depends on adjuvant factors. The mechanism whereby the defence of the tissues is maintained when the bacillus is injected in small quantities and appears to be ruptured in the presence of other organisms, certain chemical compounds, an accumulation of blood, or particles of foreign material embedded in the wound, is not clearly understood. Recent observations made in the department of bacteriology of the University of Edinburgh [1] show that the effect even of massive doses varies in different animals and in individuals of the same species. This experimental study was the corollary of a prior investigation into a series of cases of post-operative tetanus attributed to contaminated catgut. Catgut with spores embedded in it was introduced into various tissues and tetanus occurred with great regularity, but only provided a sufficient quantity of the material—i.e., the inoculum—was implanted. In the presence of a small inoculum a variety of agents are capable of predisposing to a tetanic infection, but the majority act somewhat irregularly. The influence of other infecting organisms in promoting the development of *B. tetani* was clearly illustrated. *B. welchii* exerted an adjuvant influence with great regularity, and a strain of *B. coli*, injected in large doses along with *B. tetani* spores in sublethal doses, evoked tetanus, though when smaller doses of *B. coli* were used results were negative. The peculiar relationship of post-operative tetanus to abdominal and gynæcological operations may be due to the fact that intestinal organisms favouring the development of the tetanus bacilli have gained access to the operation area. The authors discuss the nature of the inhibitory and adjuvant influences concerned in tetanus infection and suggest that these are complex. They seem to depend not only on phagocytosis and the oxygen tension of the tissues, but also on factors intimately related to the parasitic properties of the organism and the humoral and cellular defences of the body. The irregularity with which tetanus appears in animals subjected to experimental infection is well in accord with clinical experience. A batch of catgut afterwards proved to be infected has been used for a large number of operations with only a very small resulting incidence of tetanus. Experiments with iodised catgut demonstrated the efficiency of aqueous iodine in the sterilisation of this form of ligature for surgical use. Since, largely owing to the work of Prof. Mackie, sterilised surgical catgut can now be added to the substances in the Schedule of the Therapeutic Substances Act, 1925, this small but tragic group of post-operative fatalities should in the future be prevented.

[1] Certain Factors that Promote the Development of the Tetanus Bacillus in the Tissues, with Special Reference to Post-operative Tetanus—an Experimental Inquiry. By T. J. Mackie, M.D., D.P.H., D. G. S. McLachlan, M.B., and E. J. M. Anderson, B.Sc. A Report to the Department of Health for Scotland. Edinburgh: H.M. Stationery Office. 1929. Pp. 31. 2s.

WE have to announce that Lieut.-General Sir Arthur Sloggett, who was Director-General A.M.S. on the western front from 1914 to 1918, died on Nov. 27th in his seventy-third year.

WE have also to record the death of Sir John Cockburn at the age of 79 on Nov. 26th. He was a medical graduate of the University of London and practised medicine before taking up the political career which led to his becoming Premier of South Australia and afterwards Agent-General in this country.

IN a report of the annual meeting of the Royal Faculty of Physicians and Surgeons of Glasgow allusion was made to Mr. Freeland Fergus as late instead of past president of the Faculty. We regret the slip, and are happy to say that the suggestion was entirely without foundation.

THE annual meeting of the British Institute of Radiology, incorporated with the Rontgen Society, will be opened by Mr. Arthur Greenwood, Minister of Health, at 2.30 P.M. on Wednesday, Dec. 4th, at the Central Hall, Westminster. The Mackenzie Davidson lecture will be given at 3.15 P.M. on the same day by Prof. Gösta Forssell, whose subject will be the Radiotherapy of Malignant Tumours in Sweden. At 6 P.M. on Dec. 5th Prof. A. S. Eddington, F.R.S., will give the Silvanus Thompson lecture on X Rays in the Stars. Further particulars of the meeting will be found in our medical diary. The annual dinner will take place at 7.30 for 7.45 P.M., on Friday, Dec. 6th, at the Trocadero Restaurant, Piccadilly-circus, London. Mr. C. Thurstan Holland, F.R.C.S., the President, will take the chair, and application for tickets should be made to Major D. B. McGrigor, 32, Welbeck-street, London, W.1.

DERBY CITY HOSPITAL.—This poor-law hospital, which, when completed, will have 350 beds in 11 wards, has been opened by the Mayor of Derby, Alderman J. H. H. Grant. It is claimed that the building is the last word in hospital equipment, and that the X ray plant is "superior to that in any London hospital." By the movement of a lever the beds can be transformed into wheeled stretchers; 4000 pieces of crockery an hour can be washed and sterilised; and the medical officer is connected by telephone with every part of the building.

The Clinical Interpretation of Aids to Diagnosis.

A Series of Special Articles contributed by Invitation.

LIV.

INTERPRETATION OF RADIOGRAMS OF THE ALIMENTARY TRACT.

PART I.*—GENERAL TECHNIQUE: THE ŒSOPHAGUS.

IN the radiological investigation of the alimentary tract there are certain fundamental difficulties to the uninitiated:—

1. X ray pictures are the result of the obstruction to the passage of the rays. They represent the shadows cast by all the substances through which the rays pass irrespective of their distance from the surface or from the X ray tube. There is no perspective.

2. The opaque food outlines cavities only in so far as they are filled—the actual wall of the cavity is not represented by any distinguishable shadow.

3. The whole of the alimentary tract is a living muscle. To understand it we must forget the cut-and-dried anatomical descriptions which give us the impression of an inert organisation of tubes which pass the food from the mouth to the anus. A living conception, especially as regards the stomach and duodenum, is fundamental. The possible variations within the limits of the normal are sometimes surprising, even to those with long experience.

Success or failure in diagnosis depends so largely on technique that one cannot eliminate it, even in a short article. It is not just the exposure of one or two films after an opaque meal—to imagine that a reasonably accurate diagnosis can be arrived at by such methods is as futile a conception as suggesting that one photograph can represent an ataxic gait. To arrive at accurate diagnostic results involves a tedious and well-thought-out examination which consists of: 1. Preparation of the patient. 2. Taking a brief history from the patient himself. 3. A series of fluorescent screen examinations, before and after the opaque food has been given, in which manipulation and palpation are freely employed. As many radiographs as may be necessary are taken of the appearances noted on the screen for record and demonstration purposes. 4. Summing up the evidence—that is, detailed examination of all the films, weighing up the notes of the screen examinations and also the clinical notes that have been taken. 5. Issuing the report.

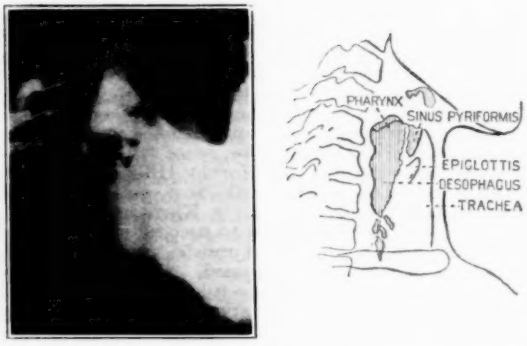
Preparation.

A purgative, two days before the examination and possibly an enema the day before, are necessary precautions against delay in the passage of the opaque food from mechanical causes. If the purgative is still acting when we examine the patient, it will give an impression of hurry that is as artificial as would be the delay of the opaque food by the stagnation in the cæcum or elsewhere in costive patients if no preliminary clearing had been carried out. In order that the stomach may be empty, no food is allowed for some hours before the examination. Apart from these precautions, the patient should live his usual life, for we wish to examine the alimentary tract under the least abnormal conditions we can arrange. During the period of examination purgatives should be avoided and the patient should conform as nearly as possible to his usual routine of life. When the examination is complete it is very advisable to ensure the voiding of the opaque food before it sets into a hard mass, as is liable to happen if no action of the bowels takes place for a day or so.

Technique.

The actual technique employed will differ according to local conditions—it must be so arranged that by a minimum of observations practically the whole alimentary tract will be observed. If the examination, therefore, starts early in the morning, the single opaque meal can be followed straight through till the evening; but if the first observations are made at, say, 2 o'clock, only a few hours are available and recourse is had to a system of double feeding. In these circumstances the first meal is watched from time to time for a couple of hours till all information as to the œsophagus, stomach, duodenum, and proximal small intestine is obtained. The patient comes for further observation on the following day, having had another opaque meal five hours before his appointment, preferably a real food mixed with opaque salt in order that, if there is a residue in the stomach, it will be a test under comparatively normal conditions. This method has decided advantages, both from the point of view of the convenience of the observer, and also because it gives greater opportunities for confirmations of observations, which are of the first importance.

FIG. 1.



Paralysis of the upper third of the œsophagus. The food sticks in the lower pharynx, particularly in the sinus pyriformis on either side of the larynx in the laryngeal pharynx and in the upper œsophagus. Forcible swallowing acts with difficulty and incompletely passes the food on.

Clinical History.

By taking the clinical history three main objects are obtained:—

(*a*) The radiologist can obtain personal knowledge of the history; frequently his experience indicates leading questions which bring out suggestive data, entailing variations in routine without which diagnosis would not be possible. As a simple example, a note that only certain types of food produce a sensation of œsophageal obstruction at once suggests that the opaque food employed should as nearly as possible correspond to the food that gives rise to the trouble.

(*b*) It gives the opportunity of getting to know something of the patient's mentality.

(*c*) An opaque meal cannot but be an ordeal to some patients, and a chat beforehand gives the radiologist the chance of allaying quite natural nervousness.

Screen Examination.

Presuming that the observer's eyes have been thoroughly prepared, either by the use of special goggles or by a period of waiting in the dark, the screen examination proceeds with the observation of the passage of the opaque food through the œsophagus and the rest of the alimentary tract, a number of observations being necessary at intervals determined by the rate at which the food passes and by other factors. This, however, is far from the whole story, for in addition to the use of his eyes the observer can manipulate the abdominal organs and judge from the movements of the shadows such things as undue fixation, laxity, or the cause of displacements. Even more important is the combination of the sense of touch with that of sight, from which combination

* Articles in this series on the other parts of the Alimentary Tract will appear in subsequent issues of THE LANCET.

he may obtain invaluable evidence as to the presence, site, and perhaps also the nature of any resistance that is detected, the reason for incomplete filling of any portion of the gut, the exact site of pain on deep pressure. It is essentially the work of a trained medical radiologist.

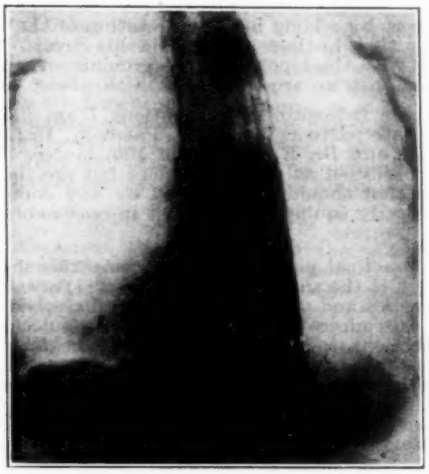
A thorough screen examination is a very complicated and intense method of investigation. It requires absolutely undivided attention, for the observer may be put on the track of the cause of the symptoms by one transient observation which, of course, he must always attempt to confirm. In these observations it is essential for his own safety that he must be speedy, otherwise he is unduly exposed to radiations which will ultimately lead to disastrous results. In using his hands for palpation, whether bare or clothed in X ray proof gloves (which not only interfere with his sense of touch but also give him a false sense of security), he must never allow them to be in the direct beam of the rays. This can only be accomplished by using a very adaptable apparatus with which the illuminated area can be rapidly and easily cut down to a small focus and moved about over the organs that are under investigation, his palpating hand being always outside the illuminated area.[1] It is a complicated and delicate method of investigation that is as valuable as it is difficult, and it requires long experience to obtain the best results.

During the course of the screen examination X ray films are exposed as a record of what is seen on the screen. These are complementary to and cannot replace the screen examination. They record as far as possible such things as the radiologist notes on the screen. In this combined screening and filming technique it is seldom that the radiographs give the clue to the diagnosis—they merely confirm and record what has been noted on the screen. It very frequently happens, however, that the radiologist sees things on the screen which he is unable to record on the films—e.g., a duodenal cap which is irritable and can only be maintained normally filled for a brief period, a period that is quite sufficient to convince him that it is normal, even though his films show an apparent deformity, due to the partial filling of the cavity.

The technique of radiography should be absolutely standardised so that the radiologist need have no doubt as to the quality of the films he will have to examine when he makes his report—the exposing of the films is just an incident for record purposes in the course of his screen examination. He may, however, need a series of films to confirm the persistence or otherwise of certain conditions—e.g., that peristaltic waves miss out a certain section of the stomach, probably indicating an early growth, or that the deformity of the duodenal cap is persistently the same in character. Such serial radiograms need not be taken in very rapid succession, in fact they are of more value if they are made at intervals of a few seconds, since the average rate of peristalsis in the stomach is about three a minute.

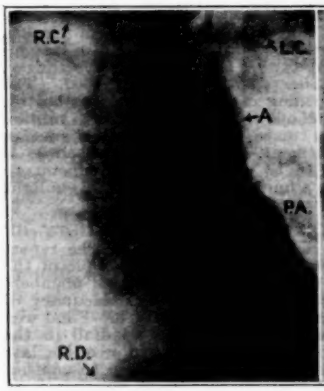
[1] See the Dangerous Art of Palpation, British Journal of Radiology, (B.I.R. Sect.), October, 1926, xxxi., 385.

FIG. 2.



Old-standing case of cardiospasm in which the œsophagus has become much dilated and tolerant to holding large quantities. The act of vomiting—comparable to and very like the gush of pyloric obstruction—only partially empties the cavity. Note the thin tail of the little opaque food (indicated by a dart) that is passing the cardiac orifice. Also note that the increase in width of the œsophagus is accompanied by increase in length, so that the last few inches lie nearly flat on the diaphragm, forming an angle around which it is practically impossible for a bougie to find its way. Blind bougies should therefore never be used under any circumstances.

FIG. 3.



Œsophageal obstruction. The funnel-shaped lower end of the shadow suggests spasm—i.e., that the lesion is one affecting the mucous membrane. The film is taken in the semi-lateral position, but the patient is not sufficiently rotated to show whether the mediastinum is clear or not.

FIG. 4.

Œsophageal obstruction due to growth. Note the tortuous course but no displacement and a suggestion that the channel is in the middle of the growth. It is probably a growth in the wall of the œsophagus and its outline can just be detected on the film. It is indicated on the tracing by the dotted outline.

FIG. 5.

Typical œsophageal pouch. Note the rounded outline of the lower part of the shadow and the absence of any outlet.

R.C. = right clavicle; L.C. = left clavicle; A. = aorta; P.A. = pulmonary artery; R.D. = right diaphragm; P. = œsophageal pouch; AA. = aortic arch.

Interpretation of Observations.

It is most unwise, even in an apparently straightforward case, to attempt to arrive at a diagnosis without mature consideration. The radiologist should first carefully go through the notes that he has made of his screen examinations, examine all the films in detail, and then write out a précis of his observations

which will form the first part of his report. This entails time and concentration. Not until he has done this should he attempt to draw conclusions and complete his report on the case. Having made up his mind as to the interpretation of the observations he has recorded in his précis, he should return to his original clinical history and see how his conclusions fall in with the clinical picture. Only when he has duly considered these things is he in a position to complete his report by adding his interpretation of the observations that he has recorded in his précis. It is mainly with the report and the grounds on which it is based that we are concerned in this brief outline.

For the radiographic illustrations I am indebted to my late partners Dr. R. S. Paterson, Dr. E. W. Twining, and Dr. E. D. Gray of Manchester. These are not selected as show specimens but are the type of film that should be produced by any competent and properly equipped radiologist in reasonably easy cases.

For practical purposes the abnormalities that are met with in the alimentary tract are: (1) anatomical peculiarities and displacements; (2) disturbed function; (3) ulceration and the results of ulceration; (4) adhesions; (5) new growths; (6) the formation of diverticula. Various other lesions are occasionally met with, but they are comparatively so rare that we may almost neglect them—nor is it possible here to consider the displacements due to causes outside the alimentary tract.

Œsophagus.

When the patient is screened during the act of swallowing, the food is seen to pass over the back of the tongue straight down through the pharynx and into the œsophagus. Naturally, fluids and thin foods pass much more rapidly than thick. With fluids the process looks like the action of gravity, and the time taken to reach the cardiac orifice is not more than one or two seconds, whereas with thick pasty food, such as we use for œsophageal examinations, it takes perhaps 10 or 15 seconds. No indication of peristalsis is seen in the upper third and it is only when there is obstruction that we can definitely note peristaltic activity in the lower two-thirds. Normally the food bolus that is swallowed passes in an elongated mass at a more or less even pace all the way down, perhaps pausing momentarily at the cardiac orifice. When there is an obstructive lesion, particularly low down, we see the peristaltic wave pass down the column of opaque food as a ring of contraction and, as this approaches the obstruction, the opaque food regurgitates upwards through the wave of contraction, unless the pressure exerted is sufficient to canalise the obstruction. The appearance on the screen is almost as if the wave of contraction was passing from below upwards, as its effect on the shadow food is to shoot it upwards, leaving the immediate region of the obstruction empty. This appearance has given rise to descriptions of reverse peristalsis, which condition, so far as I know, is not actually to be seen in the œsophagus.

In the œsophagus there are no anatomical peculiarities, but displacements due to aneurysms, enlarged glands, and various chest conditions are common. Function is sometimes impaired owing to interference with nerve-supply. Normally a bolus of opaque food should pass down at an almost regular speed, fluids passing more rapidly than solids, and leaving practically no traces. When there is interference with the nerve-supply, the opaque matter tends to stick to the walls of the laryngeal pharynx and upper œsophagus. It is usually a case of repeated acts of deglutition, often accomplished with difficulty, before the food is passed down, perhaps with the help of a draught of water. Such an appearance indicates *interference with the nerve-supply* (Fig. 1).

The not uncommon condition known as *cardiospasm* (achalasia of the cardia) (Fig. 2) is also probably an example of disturbed function. There is marked obstruction at or just above the cardiac orifice that ultimately leads to enormous dilatation of the œsophagus. The character of the food seems to make little or no difference and, in extreme cases, one can fill the œsophagus up to the level of the clavicle with large quantities of food. A portion of this is usually vomited, the rest may pass on in time whenever the orifice relaxes. Twenty-four hour residue is, however, not very uncommon.

Simple ulceration of the œsophagus is rare, and gives rise to obstruction by reason of induced spasm from the irritation of certain foodstuffs. It is therefore important to make up an opaque food that is likely to set up the spasm or, as a routine stand-by, to give a mouthful of dry toasted crumbs before the opaque food is swallowed. The patient will always tell the observer when the spasm has been induced and he can then give the opaque food and note the position and nature of the obstruction (Fig. 3). Malignant ulceration may also be investigated by this bread-crumb method, and the obstruction due to the spasm may be noted long before there is organic narrowing of the passage. Naturally it is not possible to distinguish malignant from simple, specific, tuberculous, traumatic, or other ulcerations, except on purely clinical grounds, but the observer will take films and will also screen extremely carefully, in the upright semi-lateral position, to see whether or not there is abnormal shadowing around, and particularly below the site of the obstruction. Intrinsic growths with ulceration of the œsophagus seldom give any detectable shadow; those that extend to the œsophagus from the mediastinum are usually quite well seen on the screen. These *extrinsic growths*, however, are seldom associated with spasm, and the resulting X ray picture is one that suggests a narrowed, displaced, or tortuous passage of the opaque food through the obstruction (Fig. 4). It is a rather different type of picture from that of ulcerative obstruction, where spasm plays a large part and the lower end of the food shadow ends abruptly in a funnel-shaped tail.

The *œsophageal pouch* (Fig. 5) originates at the junction of the pharynx and œsophagus. As it gradually enlarges it sags down from this position, and the lower end of the shadow comes to a considerably lower level. The lower outline of a pouch is always rounded, with no suggestion of an outlet at the lower end. They are seldom detected before they are the size of a walnut. Diverticula also occur lower in the œsophagus, but they are very rare.

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A NEW CLINIC AT BIRKENHEAD.—Sir George Newman, chief medical officer of the Ministry of Health, on Nov. 20th, in opening a new clinic for children in Birkenhead, said that children to-day are healthier, better, stronger, weigh more, and are taller than children of 1907. The clinic represented the opening of the golden age of health. In the 1520 clinics throughout the country almost a million children received medical treatment last year, while another million had dental treatment. The Birkenhead clinic is the first in the country to be equipped with a cinema to educate mothers. It has a nursery and an artificial sunlight room, a sand pit, and a lawn.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.—Our Dublin correspondent writes:—The report for 1928–29 of this Society furnishes a sad example of the need that exists among near relatives of deceased members of the medical profession, as well as of the inadequacy of the Fund to meet the demands made on it. The Fund was fortunate during the year in obtaining a windfall in the form of a bequest of some £3500 from the widow of the late Mr. W. J. Hepburn, F.R.C.S. Edin., in addition to another smaller bequest. The actual increase from subscriptions, however, was a little less than £700, while the direct disbursement of grants came to £1644. The number of grants made was 83, and the average amount was £22 6*s.* 6*d.* How inadequate this is may be judged from the fact that in one case, in which a grant of £30 was made, the recipient's means from other sources were nil, while in some other cases the recipient was, apart from the grant from the Fund, dependent on the old age pension. The Fund is administered with great care and economy and deserves a more widespread support than it receives.

Special Articles.

GENERAL MEDICAL COUNCIL.

PRESIDENT'S ADDRESS.

AT the winter session of the General Medical Council, which opened on Nov. 26th, the President, Sir Donald MacAlister, recalled the fact that it was 40 years since he was admitted to membership of the Council, and 25 years since he was first entrusted with the responsibilities of the President's chair. "The time is drawing near," he said, "when I must resign into your hands the trust you have so long and so loyally reposed in me; but if you are good enough to consider that prolonged experience may in some measure compensate for lack of youthful vigour and initiative, I am willing for a little longer to continue my endeavours in your service."

A Retrospect.

"Forty years' retrospect," said Sir Donald, "satisfies me that, amid divers changes of operation and vicissitudes of public appreciation, there has been a steady advance, both internally in the Council's practical efficiency, and externally in its general estimation by the Government, the Judicature, the public, and the profession of medicine at home and abroad. The Council has not failed to respond to the progressive demands of the changing years, and, by those qualified to criticise and to judge, its efforts have been approved and encouraged. In the light of my long and intimate knowledge of its working I cannot but pronounce the Council to be to-day a better instrument for fulfilling in the public interest the duties laid upon it by the Medical Acts than it was 40 years ago. It is more harmonious, more zealous, better informed, and more happily inspired now than then."

Changes in Membership.

The President went on to record changes in the personnel of the Council. "Death has," he said, "taken from us Sir Thomas Jenner Verrall, a direct representative of English practitioners since 1912, an eager and fluent contributor to our discussions, of ripe experience in professional affairs, and zealous for the honour and welfare of the profession. Prof. Arthur Thomson has retired from the representation of the University of Oxford, after faithfully serving his university on the Council for nearly a quarter of a century. He carries with him our esteem for his sturdy independence of character, and our respect for his keenly critical intellect and his wide scientific knowledge. Mr. William Guy has completed his term of office as an additional member for dental business, originally appointed by the Privy Council in 1921. To his energy and his familiarity with dental education and policy the Dental Board owes much of its success in establishing itself as a new organ of professional government. Though Sir Edward Farquhar Buzzard has retired from his seat as representative of the Royal College of Physicians of London, we happily do not lose the benefit of his counsels. For the University of Oxford has done us the grace to appoint him its member here, and we heartily welcome him back. The Royal College has appointed in his room Dr. Henry Letheby Tidy, of St. Thomas's Hospital, and honorary secretary of the Royal Society of Medicine, whose repute as a physician and a scientific investigator has preceded him, and from whose enlightened coöperation we promise ourselves much profit in every way. As additional members the Privy Council has appointed two members of the Dental Board, Mr. John William Alexander McGowan, of Glasgow, and Mr. Edward Leo Sheridan, of Dublin, elected by the qualified dentists of Scotland and of Ireland respectively. With Mr. Dolamore for England we have now for the first time a dental member for each of the three countries. This readjustment removes from the Council one English additional member, Mr. William Robert Ackland, appointed last year; but he will still continue to serve his profession on the Dental Board, as he has been re-elected by the qualified dentists practising in England and Wales.

"The recent election of direct representatives to the Council has resulted in the unopposed return of Sir Norman Walker by the medical practitioners of Scotland, and of Dr. Leonard Kidd by those of Ireland, north and south. In the English constituency Dr. Brackenbury is assured of a fresh term of office dating from Jan. 1st, 1930; and Sir Jenner Verrall's place is filled by the election of Mr. Nathaniel Bishop Harman, who has approved himself highly competent in matters of professional administration."

Indian Medical Degrees.

The President then referred to the position of Indian medical degrees, and their recognition by the Council, as furnishing guarantees for efficient practice in this country, under the provisions of the Medical Act, 1886, Section 13. "In previous addresses, and in the minutes of the Executive Committee, you will," he said, "find particulars of the inherent difficulties of this question, and of the patient efforts we have made since 1922 to overcome them. I pointed out to you last May that the period for which recognition of Indian medical degrees for registration here was provisionally granted, pending the appointment of a Government Commissioner of Medical Qualifications and Standards, was fast running out. I stated that the evidence of separate inspectors, appointed ad hoc by the Government of India, had been received; but that their reports lacked reference to any common standard comparable with our own, and moreover disclosed individual deficiencies in regard to Indian methods of training and testing which could no longer be overlooked. I expressed the Executive Committee's earnest hope that the Government of India would not delay further its assumption of the responsibility, which rests upon it by law, to maintain such standards of medical qualification as would be acceptable for purposes of recognition outside of India. I endeavoured to make it clear, once again, that the Council is not concerned with the standards deemed sufficient for practice in the several Indian provinces. It is concerned solely with the standard which it is required by law to guarantee as in fact sufficient for efficient practice in Great Britain and Ireland. Qualifications admitted to the British Register must reach that standard.

"On behalf of the Council, on June 12th, 1929, I addressed a letter to the Secretary of State for India setting forth in detail the grounds for these conclusions, and pointing out the essential services both to India and to the Council, which fell to be rendered, in the absence of an All-India Medical Council, by a full-time Commissioner appointed by the Indian Government. His reports, authoritative, fully informed, and impartial, transmitted through the Indian Government, would be received by the Council with full confidence as a basis of action, and would furnish it with the guarantees that are indispensable for the due fulfilment of our statutory duties in respect of recognition. This letter was followed by communications from the India Office, stating that, as a temporary measure, the appointment of a whole-time Commissioner of Medical Qualifications and Standards had been agreed to by the Central and the Provincial Governments, pending the settlement of the permanent machinery required to enable the General Medical Council to discharge its obligations.

"These intimations were laid before the Executive Committee on July 22nd, when they agreed that, pending the confirmation of the appointment of the Commissioner, the recognition of Indian Medical degrees, which would otherwise cease on July 31st, would be continued until the meeting of the Committee in February, 1930. In August we were asked whether we agreed with the Secretary of State in thinking it desirable to offer the appointment to Colonel Needham. The reply was to the effect that, from our experience of the value of Colonel Needham's unique qualifications, we deemed the proposed appointment in every way desirable. In September we learned that Colonel

Needham had accepted the appointment, had made arrangements to leave for India on Nov. 1st, and was prepared to make his inquiries and report to the Executive Committee in time for its meeting in February. On Oct. 15th the India Office informed the Council that owing to action taken in the Legislative Assembly on Sept. 25th, the Government of India and the Secretary of State had felt obliged to cancel the appointment already intimated, and that Colonel Needham's departure for India was countermanded. The India Office further stated that the Legislative Assembly will meet again in January, and it was proposed to ask it to reverse its decision, and to explain to it, "not only the unfortunate results on the prospects of Indian students that would follow from a definite refusal to appoint a Commissioner of Medical Standards and Qualifications, but also the genuine desire of the General Medical Council to help India consistently with the obligations which British statutes impose on them."

"These perplexed and perplexing communications," said Sir Donald, "came before the Executive Committee yesterday, and I was instructed to inform the India Office that the final decision thereon must be postponed until the Committee's meeting in February next. But the inevitable absence of authoritative reports on the actual standards of study and examination for Indian medical qualifications would be of the most serious import. The Committee would in fact be deprived, by action taken in India, of the necessary guarantees of sufficiency, on the basis of which alone it would be in a position to extend recognition of Indian medical degrees beyond the period now current."

Qualifying Examinations.

"The Executive Committee, charged by the Council with making arrangements for the cycle of inspections of qualifying examinations to begin in 1930, have carefully considered the appointment of inspectors in medicine, surgery, and midwifery respectively. They have agreed to invite certain eminent and experienced members of the profession to undertake the important duty of inspection, and hope shortly to make definite appointments which will meet with the approbation of the Council. Visitations and inquiries have continued, at the instance of the Education and of the Examination Committee, in reference to the courses of study, and to examination requirements, bearing on important subjects of the professional curriculum. The visitations of recognised examinations for registrable diplomas in public health, sanitary science, and State medicine have been actively proceeding, and are indeed nearly completed."

The Pharmacopœia.

"This Committee," said the President, "will report on steps taken, and to be taken, with reference to the adhesion of this country to the proposed international agreement on the pharmacopœial unification of potent drugs, following on the International Conference held at Brussels in 1928. At this conference the Council was represented by the late Sir Nestor Tirard. The Committee will also transmit to the Council a report of progress made by the Pharmacopœia Commission since our last session. It will be found that the Commission has been diligently and fruitfully engaged in preparing for the issue of the British Pharmacopœia due in 1930, and has opened up communications with the British Dominions and with the United States which are likely to extend its usefulness."

At the conclusion of his address a vote of thanks to the President was proposed by Prof. J. B. Leathes, and seconded by Sir Norman Walker. The Council then passed to the consideration of penal cases.

HOSPITAL SAVING ASSOCIATION.—The annual report shows that the contributions during the past year amounted to £320,714, as compared with £248,878 in the preceding 12 months. There are now 6711 groups and 651,713 members, and during the year 172,457 contributors and dependents were treated at voluntary hospitals on the list of the association.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE annual meeting of Fellows and Members of the College was held on Nov. 21st, with Lord MOYNIHAN in the chair.

The PRESIDENT referred to points of special interest in the annual report of the Council, such as the examination for primary Fellowship held in Canada for the first time this year; the establishment of a research scholarship; and the formation of a British College of Obstetricians and Gynæcologists. With reference to certain provisions in its Charter which appeared to conflict with the powers and functions of the Royal Colleges no satisfactory compromise had, he said, yet been reached.

Dr. E. W. D. KITE asked whether it was true that in the examination for the Fellowship the examiners decided beforehand the proportion of candidates to be passed, and that once the number determined had been reached the remaining candidates inevitably failed.—Dr. F. W. COLLINGWOOD suggested that the Fellowship examination was no true test of operative skill, and that it should be revised in such a manner that this could be gauged.

The PRESIDENT said that it was not true that the proportion of successful candidates was decided before the examination. Every candidate was passed who reached the required standard; the proportion of successful candidates was small because the standard was high. Dr. Collingwood's criticism he considered was just; but unfortunately it was not possible to assess operative ability by means of an examination; it was possible only to judge whether the candidate had had a reasonable opportunity of acquiring it.

The report was then adopted.

Mr. SOMERVILLE HASTINGS then moved:—

"That this forty-first annual meeting of Fellows and Members again affirms the desirability of admitting Members to direct representation upon the Council of the College, in view of the fact that there were 18,587 Members as against 1945 Fellows."

He apologised for repeating an appeal which had now been made annually for over 40 years. In refusing to admit Members to the Council the Fellows were exercising a legal right, according to the Charter of the College. But that legal right had been obtained originally in an unjust manner, and he was calling upon the Council to right a previous wrong. If the Charter was examined, he said, it would be seen that in 1800 the Royal College of Surgeons of London was founded by Royal Charter, and the governing body of that day was elected by the Members. In 1843 the name was changed to the Royal College of Surgeons of England, and at the same time the degree of Fellowship arose. It was decided that the first Fellows should elect a Council, and needless to say they elected themselves, retaining the power to elect others without examination. The Members had suffered under a sense of injustice ever since. It was not, he said, that the Members were dissatisfied with the College; on the contrary, they wished to contribute to it. Most of the Members were general practitioners, a body of men essential to the coördination of medical services. The Council at present was in danger of becoming archaic; the Fellows did not encounter the general run of patients and were in danger of losing touch with the times. The examinations of the College, he thought, stood in need of revision. Was all the physiology included in the primary Fellowship of value to the surgeon? He appealed to the members of the Council not to harden their hearts against a reform which would be to their advantage.

Dr. H. S. STRATFORD, in seconding the motion, said that the arguments in favour of admitting

Members to the Council were both historical and practical. THE LANCET in 1845 had described the Charter, which "deprived members of the right to sit on Council," as "mischievous and iniquitous." He reasserted that Members wished to be represented on the Council not for their own profit but that of the State and community at large. During the war Members of the College had done an enormous amount of work, and the mortality among them had been relatively much higher than among the Fellows. The franchise had been accorded to women on account of their war-work. Members of the College needed a representative to voice their views and difficulties on the Council. The examination for the Fellowship was, he considered, not practical enough. Students should be signed up by their teachers for simple emergency operations such as tracheotomy, amputation, appendicectomy, before qualifying In obstetrics practically all normal cases nowadays were attended by midwives; students were only trained to treat abnormal cases, and saw few that were normal. He was glad to see that a College of Obstetrics and Gynæcology was being formed.

Dr. REDMOND ROCHE said that the Council in 1907 had sent a circular letter to all Fellows and Members stating that although the Council had decided to admit women to the College, they were anxious to obtain the opinions of Fellows and Members. Now, in the report for 1929, the Council declared that, in view of the postal vote of the Fellows, it was not prepared to give Members direct representation. On the previous occasion the Council had made a decision and was ready to carry it out. Now the only reason given for refusing Members representation was the vote of the Fellows.

Dr. C. W. BROOKE opposed the motion. Members, he said, who really desired this reform should approach a Member of Parliament with a view to revision of the Charter. In the meantime, if the Royal College of Surgeons was an antique, it was at least a priceless antique, and should be preserved intact. He suggested that the President should rule this resolution out of order at future meetings.

Dr. ARTHUR HAYDON suggested that six Members should be elected to the Council and created honorary Fellows. If representation of Members on the Council was to remain impossible he was prepared to contemplate the formation of a new College.

In putting the motion the PRESIDENT said that, historically, the facts of Mr. Somerville Hastings were inaccurate; Members had never been in a position to elect the governing body; the original body had been self-elected. The large bulk of the Fellows were in general practice, so that the Council was in fact elected by general practitioners. Judging by the small numbers of Members who attended this annual meeting, the desire for representation in Council by Members was not widespread. Changes in the form of examinations had to be made gradually in order to be fair to the candidates. If there were any earnest desire among the Members for a change in the Charter, it could no doubt be altered legally, but until the Council was assured of that desire both Fellows and Members must continue to act under its clauses.

The motion was then put and carried, and the President announced his intention of submitting it to the Council.

BUCKSTON BROWNE ANNUAL DINNER OF FELLOWS AND MEMBERS.

The dinner held at the Royal College of Surgeons on Nov. 14th was the second of a series of functions to be held at the College, and due to Mr. Buckston Browne's generous gift of £5000, the interest of which is expended in providing an annual opportunity for friendly intercourse between Fellows and Members. In accordance with the terms of the trust, half of the company present at the dinner were Members of the College. Lord Moynihan presided, and the following is a list of those present, among whom it will be seen are several laymen whose personal connexion with the function was explained by Lord Moynihan in a few words.

Mr. W. R. Ackland, Dr. C. M. Anderson, Dr. H. T. Ashby.

Mr. Louis Baron, Mr. C. J. Bond, Mr. Victor Bonney, Mr. G. Buckston Browne, Mr. A. H. Burgess, Mr. R. H. Burne.

Mr. J. E. G. Calverley, Mr. H. W. Carson, Mr. Eustace Carter, Mr. T. Carwardine, Mr. D. K. Cassels, Dr. F. William Cock, Mr. Sydney Cockerell, Mr. Arthur Cooke, Mr. S. Forrest Cowell, Mr. S. C. Cresswell, Mr. V. A. Crinks.

Mr. Bernard Darwin, Dr. W. L. M. Day, Dr. John Dixon.

Mr. W. McAdam Eccles, Dr. H. Muir Evans, Dr. J. W. H. Eyre.

Mr. C. H. Fagge, Mr. J. Herbert Fisher.

Mr. H. Courtney Gage, Mr. Leonard Gamgee, Mr. A. J. Gardham, Dr. A. D. Gardner, Mr. G. E. Gask, Dr. Lewis G. Glover, Dr. R. N. Goodman, Sir Charles Gordon-Watson, Mr. Albert Green, Mr. C. H. Greenwood, Sir Wilfred Grenfell, Mr. Ernest W. Hey Groves.

Dr. George Hall, Mr. Sampson Handley, Prof. H. A. Harris, Mr. Ravensworth Hart, Rt. Hon. Arthur Henderson, Mr. R. G. Hogarth, Dr. G. H. R. Holden, Sir Thomas Horder, Dr. N. G. Horner, Mr. C. H. Howkins, Dr. William Hunter.

Mr. Leonard Isaac.

Dr. Thoresby Jones.

Mr. R. E. Kelly, Mr. Geoffrey Keynes.

Viscount Lee of Fareham, Mr. W. R. Le Fanu, Mr. E. K. Le Fleming, Mr. Hugh Lett, Mr. V. Warren Low, Sir John Lynn-Thomas.

Mr. C. E. A. MacLeod, Mr. W. Ernest Miles, Dr. J. L. Morton, Lord Moynihan.

Dr. F. E. Nichol.

Mr. Carlton Oldfield.

Mr. Herbert J. Paterson, Dr. C. J. Penny, Sir D'Arcy Power.

Mr. H. J. Relph, Dr. W. S. Richardson, Mr. Frank Romer, Dr. Thomas Rose, Mr. R. P. Rowlands.

Sir Percy Sargent, Mr. Graham Simpson, Colonel T. Sinclair, Prof. G. Elliot Smith, Dr. Alfred R. Spencer, Sir Squire Sprigge, Mr. F. J. Steward, Dr. C. A. Stidston, Mr. W. T. Storrs.

Dr. Edward S. Tait, Mr. Herbert Tilley, Mr. F. B. Treves, Mr. Thomas Turner.

Mr. Cecil P. G. Wakeley, Dr. F. J. Waldo, Sir Cuthbert Wallace, Sir H. J. Waring, Mr. James Watts, Mr. Russell Wilkinson, Mr. F. J. Willans, Mr. Henry Wilson, Mr. William Wyllys.

After the toast of the King, and allusion to the munificence of the donor, Lord Moynihan stated that the rule had already, he was glad to say, been laid down that no other toast would be proposed at this dinner, and that no response would be expected from anyone, but certain present, he thought, should be mentioned by name as having a connexion either with the function or with the College generally. To Mr. Louis Baron, he said, the College owed the foundation of the Bernhard Baron Research Scholarship of £500 per annum for seven years. They were all glad, he said, to welcome Lord Lee of Fareham, Chairman of the National Radium Commission, and Sir Wilfred Grenfell ("Grenfell of Labrador"), who had asked that no mention of the sort should be made of him, but his request was disregarded as the occasions were so few when he was seen at gatherings of his colleagues. Further, the President called attention to the presence of Mr. Arthur Henderson, Minister of Health; Dr. John Dixon, the Senior Member of the College, who obtained his diploma in 1854, and was 98 years of age; and Mr. Bernard Darwin, the well-known exponent of golf on the links and in the *Times*, and grandson of Charles Darwin. Lord Moynihan then requested the company to drink to the health of Mr. Buckston Browne.

After dinner Mr. Buckston Browne showed a film of Down House, Darwin's old home, which, it may be remembered, he presented to the nation at a meeting of the British Association in 1927, in response to an appeal from Sir Arthur Keith. Mr. Buckston Browne acquired the property from a grandson of the great naturalist, and transferred its possession to the British Association with an endowment for its upkeep and preservation, the condition being that the property should be regarded as a gift to the nation and open to visitors without charge. The film pictures included a view of Down House from the south, the lawn, the entrance to the Sand Walk, the study where Darwin worked, and the chair in which he wrote large portions of the "Descent of Man." In the course of demonstrating these pictures Mr. Buckston

Browne expressed the hope that Down House would be a centre of scientific research in connexion with the pursuit of surgery.

The guests on leaving were presented by Mr. Buckston Browne with a coloured reproduction of the portrait of John Hunter, which he had given to the College, and which is ascribed to Gainsborough. This portrait represents the plain, not to say ugly, Great John Hunter whose features Sir Joshua Reynolds idealised in his intellectual presentation.

ROYAL SOCIETY OF MEDICINE.

THE ANNUAL DINNER.

THE annual dinner of this Society took place on Nov. 21st at the May Fair Hotel, Lord Dawson of Penn, the President of the Society, occupying the chair. About 400 Fellows were present, and the guests included the Prime Minister, the Minister of Health, the French Ambassador (M. de Fleuriau), the Presidents of the Royal College of Physicians of London, the Royal College of Surgeons of England, the British College of Obstetricians and Gynæcologists, and the Medical Society of London; the President, Chairman of Council, and Medical Secretary of the British Medical Association; the President of the Medical Women's Federation; the President of the Royal Academy; and the Dean of Westminster. Among others supporting the Chairman were Commander L. C. Bornacchi, Sir James Berry, Sir John Bland-Sutton, Sir Walter Fletcher, Sir Arthur Robinson, Lord Lee of Fareham, Prof. Sidney Russ, Sir Albert Levy, Sir Alfred Lewis, Mr. Hugh Macmillan, and Dr. Kay Menzies.

The King's Health.

The toast list opened auspiciously, for the chairman, in proposing the loyal toast, took occasion to make a welcome pronouncement on the King's health. He said: "Upon this day last year there began that grave illness which nearly cost the King his life and the nation a beloved Sovereign. This is a suitable gathering in which to state that the King, in his recovery, goes from strength to strength."

The Prosperity of the Society.

The toast of the Royal Society of Medicine was proposed by the Prime Minister, who offered a tribute of praise to the medical profession, speaking as a private individual and as a public servant. He would leave to the Minister of Health the task of entering into details which, he believed Mr. Greenwood had discovered, occasionally raised somewhat thorny questions between the profession and himself. It was one of the great demands made upon a Prime Minister's time and intelligence to shift difficulties upon other shoulders, and to take smoother paths than his Ministers were sometimes able to choose. Comparing the modern doctor with the modern politician he found certain resemblances. Both were now less interested in cures than in maintaining the general health of the community. He had noted, also, that the medical profession was becoming much less interested in close and detached examination and consideration of an organ than it was in the harmonious and healthy inter-relation of the organs promoting the general health of the body, and here, again, was a point of contact with the politician. Standing in front of this gathering he felt that he was speaking to those who belonged, in some mysterious sort of way, to a common brotherhood. He had to couple with this toast the name of Lord Dawson, who was an old acquaintance of his. They had first met during Lord Dawson's student days, at a most respectable supper, issuing together towards midnight, both bound for the north of London. Their combined wealth that night was insufficient to save them from walking from the south end of Gower-street to Holloway station. A third party present at that meeting, however skilled in prognosis, would hardly have forecast that it would be their fate not to meet again until 40 years later they were fellow-guests at Buckingham Palace.

Lord Dawson, in response to the toast, claimed the Prime Minister as an apostle of the art of healing, for had he not recently been engaged in trying to allay and heal international strife? More than that, he had had the skill and understanding to try to institute a state of immunity amongst nations against the virus of war. It fell to the President of the Society to give an account of it. It was faring well; its finances were such as would satisfy even the Chancellor of the Exchequer. Beyond the Society's ordinary Budget, there was instituted, a little more than a year ago, a "Royal Society of Medicine Trust," the object of which was to further learning and to help young men who were engaged in research, especially by placing before them such works as would help them to pursue it effectively. An anonymous donor had recently given a donation of £1000 to this fund. Lord Dawson spoke of the advances made during the past year, especially the wider knowledge gained of the applications of radium and the organisation of its availability. The researches which had revolved round radium, vitamins, and hormones had revolutionised thought in the same way that, years ago, bacteriology had revolutionised it. We had got away from the conception of mass and weight, and had moved from matter to influence, from the static to the dynamic. The recent outcome of research into distemper was especially satisfactory, since its credit would fall to this country, where friendship between man and dog was a matter of national pride. The research was a fine exemplification of team-work. With regard to the application of medicine to the services of the country, the Local Government Act had opened up a new chapter in the relations of the medical profession to the Government. It was a satisfaction to medical men to know that the Minister of Health shared the belief that the secret of progress in health services depended on a responsible relationship between the medical profession and the local authorities. In that part of medicine which abutted on administration and on the interpretation of knowledge for the public good, the profession sought close relationship between themselves and the administrative bodies. In the territory which concerned itself with knowledge, education, and research, medicine must remain for ever unfettered.

Possibly the best way of bringing knowledge to the service of the people would be to set up semi-autonomous bodies with members having administrative and specialist knowledge sitting together, which would bring about quickness of decision and flexibility of thought. It would be the most rational form of delegation. The experiment had already been tried in respect of broadcasting, and of electricity; and the best and the latest example of all was the organisation of the nation's supply of radium, which organisation would commend itself to the consideration of all thoughtful people.

The Maintenance of Voluntary Hospitals.

Dr. A. P. Thompson submitted the toast of the guests. He said that statesmen, like physicians, were great borrowers; they had to acquaint themselves with all sorts of advances in human knowledge and ingenuity, in order that they might be brought to fruitful use in the community. On the subject of the voluntary hospitals, he said that to him people who talked glibly and cheerfully about the disappearance of great free institutions like the voluntary hospitals appeared as reckless of the future of this country as they must be ignorant of its history and character. The spirit of disinterested work manifested in voluntary hospitals was one of the treasures of our race, tradition, and inheritance. The sources of weakness of the voluntary hospitals seemed to be two-fold: (1) their lack of coöperation with one another and with established public health services, (2) their poverty. He believed the working man would make sacrifices to preserve the voluntary hospitals. In Birmingham, a coöperative scheme had been established, which, in two years, had resulted in a member-

ship of 360,000, and in the collection of £200,000, all the work having been done by voluntary effort. Great changes affecting the profession of medicine in its relation to the public were everywhere being discussed, and were mostly acknowledged to be inevitable. It would be idle to deny that certain tendencies had given cause for uneasiness, even alarm. It had been said that the day was approaching when the State would control all the medical services in this country, and that the first great step to this end would be taken with the fall of the voluntary hospitals.

Mr. Arthur Greenwood (Minister of Health), in responding, said that the view that the Ministry of Health had no regard for the voluntary hospital system of this country was utterly mistaken. From two points of view, the voluntary hospital system in this country was vital to the progress of public health. First, it was interwoven with the growth of knowledge on problems affecting the lives of our people; secondly, there was need of every hospital bed existing in this country. His only object was to form a great brotherhood of people who would serve the common ends of humanity. In the effort to understand the problems which doctors felt were fundamental in the public interest, he had gathered to himself the heads of the profession, in a spirit of friendship, and the response had been whole-hearted. He was appalled, as he dug deeper and deeper into the problems of public health, by our lack of knowledge, which only the medical profession could remedy. There remained much to be learned, and, when it had been learned, much to be applied. He welcomed, without reservation, the fullest coöperation of the medical profession, and would do all in his power to help that profession in its work. He asked—was entitled to ask—the members of the profession that they in their turn would assist His Majesty's Government, and would believe that the Government was as much concerned with the problems at issue as medical men were themselves, because they had got to face the results of lack of knowledge. He hoped that, as this Government grew from strength to strength, and as it was succeeded by others of similar intensity of purpose, the bond between this great profession and the Government would also grow from strength to strength. He claimed the assistance of the profession that there might issue a magnificent people, people of fine calibre and tremendous spirit, a body of citizens which would lead the world.

Mr. H. P. Macmillan, K.C., expressed his conviction of the great mutual benefit which results from association with members of other professions. Professional men were apt to get into ruts—and a rut, as had been happily said, only differed from a grave in being narrower. Sir Alfred Ewing had once suggested that we all needed "re-potting" at intervals. We got pot-bound in our professional routine, and an occasional transplantation into fresh soil was wonderfully reviving. It was only within the last hundred years that medicine, like law, had finally emerged from the fogs of mediæval mysticism. The earlier London pharmacopœias read like inventories of an alchemist's spells and potions. Even in 1824, neither morphia, iodine, nor quinine was to be found in the official Pharmacopœia. The great strides recently made in the direction of preventive medicine in the department of public health emphasised the fact that in the treatment of mental disorder alone the public was still excluded by an antiquated system from the benefit of preventive treatment. Mr. Macmillan hoped that this restriction would soon be removed. To the need for preserving the voluntary hospitals system, the Minister of Health had referred with a fitting emotion. All would rejoice that the Minister recognised the value of these institutions, and that apprehension of peril to them was not likely to be realised under his guidance.

SOUTHPORT HOMŒOPATHIC HOSPITAL.—This hospital has been purchased for £3500 by the Southport Town Council. It is in future to be used for the treatment of aged and infirm patients.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Critical Condition of the Medical Profession.

Prof. Schlossmann, of Düsseldorf, lately read a paper before the German Society for Social Hygiene on the crisis in our profession. The liberty of the medical man, he said, is a dream of days gone by and the profession cannot longer resist a progressive nationalisation. Apart from some specialists with a large income the majority of doctors earn their livelihood from the fees paid them from institutions under the State Insurance Act. This Act provides them with 250,000,000 marks every year. Moreover, the individual practitioner has to observe so many rules and regulations issued by the government and by insurance authorities that he cannot be described as a free worker. Prof. Schlossmann does not at all agree with the leaders of the profession in their fight against sick clubs and other institutions of State insurance, for he holds that it only embitters their mutual relations. It would be better, he thinks, to coöperate with them so as to get over certain abuses.

According to Prof. Schlossmann, the profession is suffering from an economic crisis, an ethical crisis, and a crisis of confidence. The position of the younger generation who have to wait several years before admission to club practice is desperate financially, but still worse is the fact that they are obliged to be without work at a time when it is most desirable that they should be gaining experience and consolidating what they have learnt. The present method of study does not create medical practitioners; two years are spent in learning chemistry, physics, botany, zoology, physiology, and anatomy, and during this time the medical student does not see a single patient. Furthermore, clinical teaching is much too theoretical. What is worst of all is the public lack of confidence in doctors. The Insurance Act leads the patient to look upon the practitioner as more of a sick club officer than a medical adviser. Medicine has changed from an empirical to a technical science. The individual practitioner is not in a position to know all the technical methods of treatment and still less to provide for himself all the technical apparatus; this is the reason why patients are often sent to dispensaries, hospitals, and clinics, which have modern equipment. The increasing number of unqualified persons and the afflux of patients towards them bear further witness to the critical state of the profession.

Prof. Schlossmann suggests not that social insurance should be limited but rather that it should be extended. The object of sick clubs should be not only to cure their members but also to keep them in good health. If this were done, and if those classes of the population who are still outside national insurance were admitted to its benefits, a great number of the profession would find employment. His address has created a sensation, for he is a man who is well known in his specialty and also as president of the successful exhibition of hygiene held in Düsseldorf in 1926. The *Ärztliche Vereinsblatt*, the official organ of the Vereinsbund, says that his opinion that the representatives of the profession are hostile to State insurance is absolutely erroneous. But the medical profession, it continues, wishes to remain a free profession whose rights and duties as to insurance practice are limited by free agreement, and it is not inclined to become a mere collection of insurance employees.

Treatment of Congenital Dislocation of Hip-joint.

The German Congress of Orthopædics discussed the results of the treatment of congenital dislocation of the hip-joint. Prof. Lange, of Munich, reported the results obtained by the bloodless method of Lorenz which has been generally adopted for 30 years. At Munich and elsewhere, he said, he had

studied the results of 2200 cases in which the reduction was performed between 3 and 25 years ago. Only in 5 per cent. had reduction proved impossible, but the difficulty was to retain the reduced joint in position, especially after the dressing had been removed. Redislocation may take place and sometimes a deforming arthritis or coxa vara may develop in the course of years. In 50 per cent. a full anatomical and functional cure was obtained, but to get this result the children had to remain under care for several years. Functional troubles rarely developed in cases where the deformity was reduced within the first two years, and the moral was that this should be done as early as possible. Dr. Spitzy, of Vienna, described a method of producing an acetabulum in cases where the reduction had been only temporarily effective. He makes the joint accessible without opening it and drives a splint, taken from the tibia, into the region above the head of femur. In this way an impediment to dislocation is provided. He has operated on 15 cases with good results.

Abandonment of a Medical Qualification.

The question whether a medical man may renounce his qualification has lately been decided by the Bavarian High Court. A doctor was being prosecuted for a crime, and, expecting to be sentenced to imprisonment and loss of civil rights, which includes the loss of the qualification, he informed the Government that he wished to renounce his qualification. Nevertheless, after being discharged from prison, he continued to describe himself in his prescriptions and on his door-plate as a qualified medical man, and was therefore prosecuted for wrongfully assuming that title and making the public believe that he was duly qualified. In the trial he pleaded that his letter to the Government had been voluntary, that he had not been deprived of the right to revoke it, and that he thus had the right of describing himself as qualified. The supreme court, however, found him guilty. It held that a medical man has the right to renounce his qualification, but only on condition that he does not intend to use it again. The defendant had been punished for his crime with the loss of civil rights which include the qualification; if he wished to regain it he would have to petition the Government for an act of grace.

Leaf Silver as a Dressing for Wounds.

Dr. Moritsch recommends leaf silver as a covering for fresh injuries, wounds, excoriations, and bruises. This material has been used by Prof. Lexer, of Munich, to cover sutures in plastic and cosmetic operations. Moritsch has noticed that under the silver leaf the wounds become cleaner and the discharge is less than under the usual ointment dressing, also the change of dressing is less painful. Owing to the bactericidal action of leaf silver the sutures may be left longer in the wound, which is of special importance with wounds under a plaster-of-Paris dressing.

Gonococcal Meningitis.

Dr. Lorentz has recently observed in the Berlin Westend Hospital a case of gonococcal meningitis. Such cases are very rare and it has seldom been demonstrable that meningitis occurring during gonorrhœa was due to the infection. In the case under his care the gonorrhœa was complicated by arthritis. The organism cultivated from the cerebro-spinal fluid was shown to be Neisser's gonococcus by microscopical, biological, and serological examination.

An international exhibition of hygiene is to be held in Dresden. It is the purpose of the exhibition to instruct the public in health matters and to give a full picture of what has been done in this direction. Whereas the exhibition of Düsseldorf was universal and included every branch of hygiene, social medicine, and gymnastics, the Dresden exhibition will be limited to personal hygiene. It is expected that the German States and Provinces, and all the bodies concerned in health, will take part, as they did in the last Dresden exhibition in 1911. Foreign countries have shown great interest in the exhibition and several governments have already declared their readiness to contribute.

In the past year 100,000 former combatants have made claims for the first time for damage done to their health by the war. In the past nine years 2½ million certificates have been given under the law for the care of the victims; 900,000 combatants receive pensions; and there are 100 offices for the care of the injured, with 500 full-time medical officers.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Clemenceau.

THE medical profession in Paris claims the great patriot as one of themselves. Georges Eugène Benjamin Clemenceau was born in 1841 at Mouilleron-en-Pareds in the Vendée, was educated at the Lycée of Nantes, and became a docteur-en-médecine. Migrating to the United States in 1865 he returned to Paris in 1870 and practised as a physician in Montmartre before he was elected mayor of the eighteenth arrondissement and a member of the National Assembly.

X Rays and Neighbourliness.

Some time back one of the great Paris dailies foreboded all sorts of troubles for the unhappy people who live in the neighbourhood of X ray installations. It was not the first time that Mr. Coutremoulins, the distinguished physicist, obtained a hearing for some of his ideas in the lay press and in official circles. Mr. Coutremoulins was one of the X ray pioneers in this country, and though he is no physician he is still at the head of the Rontgen service at the Necker. Much sensation was caused by his discovery that a photographic film is affected by the rays from a tube 100 yards away. In his experiments it was, of course, a naked tube. Mr. Coutremoulins draws the deduction that X ray installations are dangerous for the neighbourhood. Most of his medical friends would say: No, not if the tubes are protected. But their evidence is held to be biased because it is in their own interest to minimise the risk. Some years ago the Académie des Sciences of Paris appointed a special committee to study the question, and its answer was that in actual X ray work no danger exists for neighbours. Now a committee has been appointed by the préfet of police, of which Mr. Coutremoulins is a member. It is somewhat remarkable that with the exception of Dr. Zimmern and Dr. Lobligeois no other member of the committee has special knowledge of X rays. So everyone wonders what authority its decisions will have.

The Confédération des Syndicats Médicaux has sent to every member of both Chambers, senators and deputies, a formal letter containing the solemn decision of the medical profession to refuse collaboration if the social insurance law is not modified. Amendment is indeed probable, but when? The law is due to come into force on Feb. 5th. The budget discussion is only just started and will scarcely be finished by the New Year. Then come the holidays, which are sacrosanct, and January will be over.

Prof. Netter, of the Institut Pasteur, has given the Académie de Médecine his views on the ætiology of post-vaccinal encephalitis as a result of his study of a campaign of vaccination at Rotterdam. He lays the responsibility on the preparation of vaccine lymph by passage through the rabbit.

César Roux, professor of surgery in the University of Lausanne, has been awarded the diploma of doctor hon. caus. of the University of Paris. The same distinction has been granted to Dr. Egas Moniz, of Lisbon, the originator of arteriography by injection of sodium iodide, by the University of Lyon.

LONDON CLINIC AND NURSING HOME.

THE ceremony of laying the foundation-stone by the Duchess of Atholl of the London Clinic and Nursing Home, Limited, was held at the Devonshire-place entrance of the building now rapidly rising at the corner of Devonshire-place and the Marylebone-road.[1]

After the ceremony the Chairman and Directors entertained a large number of supporters and friends at luncheon at the Trocadero Restaurant, Piccadilly, when the Duke of Atholl presided.

After luncheon and the loyal toasts, Lord Moynihan, President of the Royal College of Surgeons of England, proposed Prosperity to the Scheme, which he referred to as a necessary development of modern medicine. He pointed out that, while the art of the Middle Ages still left us marvelling, the progress of science, especially in relation to medicine, during the last fifty years at any rate, had developed in an unlimited manner. Lister had ensured, he said, that a large range of cases previously termed medical should pass to the sphere of surgery, while operative surgery meant the institution of nursing homes. The scheme whose prosperity he was advocating he described as the first concerted effort to supply in London a nursing home where not only accommodation but specialised service could be obtained, with the important additions of resident medical officers, adequate nursing, and direct provision for the association of the general practitioner with the cases. Alluding to the financial support from laymen, which had made the scheme possible, he said that, while pecuniary dividends might be absent, dividends in terms of moral worth would be credited to them by the Recording Angel. In wishing heartily for the success of the scheme, he warned its supporters that criticism was ahead of them on the grounds either of their motives or of the practical nature of their plans, but that criticism, he had found, was a proof of success.

Mr. Allan Hepworth, the Managing Director, said: The ceremony we have witnessed to-day marks a further stage in the development of a scheme upon which certain doctors and laymen have been working for some few years, and which, when carried into full effect, should have far-reaching and beneficial results for paying patients, especially those of moderate means. So far as these patients are concerned there is a pressing need for provision more adequate in quantity and quality and more in harmony with present-day demands. We are not overlooking the increasing effort now being made by many of the hospitals for providing pay-beds, but only a limited number of these can occur—that is to say, that certain patients availing themselves of the service of the hospitals and being in a sufficiently satisfactory financial position are expected to pay. But when the hospitals have extended to this class the fullest provision they can, there will still remain a large section of the public demanding such a service, and on such reasonable terms and conditions as our clinic and nursing home will make an effort to furnish. We believe there is a great opening, not only in London, but also in the provinces, for many such clinics and nursing homes as the one we are now establishing, for already our scheme, and the ideals governing its working, have created widespread interest, and in two or three of our largest provincial cities a similar project is under consideration.

The advancement of our scheme has necessarily called forth criticism, favourable and adverse; we welcome both, especially adverse criticism, when it is constructive and well informed. Both on the medical and the business side we have for a long time been convinced, from facts, experience, and requirements, that there is a pressing need for a clinic and nursing home governed by the ideals, and with such service and administration as we are adopting; it is our intention to open out a wide field of valuable service for the benefit of sick people, and if this may mean the breaking down of some of the old fences, we hope to replace these with something better and more in harmony with present-day necessities.

Dr. Moreland McCrea, Chairman of the Medical Group, who also responds to this toast, will explain the position of the doctors identified with the Clinic. As Managing Director I will refer to the financial, administrative, and service side of the nursing home. Whilst the responsibility for the management of the home will rest upon the Directors of the Company, there will always be the closest coöperation with the Medical Group, and between the two there is a complete unity of views. In all our long deliberations goodwill and perfect understanding have prevailed. May I emphasise the point that this nursing home is not a hospital, it will not be administered on the usual hospital lines, and we shall in no way attempt to compete with the hospitals. Our nursing home can perhaps be better described as an hotel for sick people—that is to say, it will be directed more on the lines of hotel than a hospital, or than many existing nursing homes—especially as regards the freedom of the patients and the facilities for visiting by relatives and friends.

With reference to the financial side of the Nursing Home scheme, may I first publicly express appreciation of the services rendered by certain gentlemen in the City of London, who being actuated by a true public spirit, and considering the establishing of this nursing home a matter of great public importance, not only subscribed themselves for a large amount of the capital, but influenced other shareholders to subscribe. Without this valuable help the necessary capital would not have been obtained. It is a great pleasure to be in a position to state that the necessary capital has been found, and that our financial resources enable the Company to complete, furnish, and equip the building while retaining a working capital equal to our requirements. The Clinic and Nursing Home is a public limited company, the shares being held by about 300 shareholders, but the Company has not been brought out as primarily a money-making concern. Those in the City who were responsible for finding a large amount of the capital did not put up their money with the object of making it a remunerative financial operation, but are prepared to sacrifice their own financial interests for the sake of what they consider an important and much-needed public movement. None of them hope or expect to make money out of it. Notwithstanding this fine and magnanimous public spirit, the Directors of the Company recognise that there are two interests to look after: (1) the shareholders as investors in the Company, and (2) the patients. We are convinced we can serve the interests of both when the detailed plans and arrangements, carefully thought out, are put into operation. We expect to give the shareholders a reasonable return on their investment, whilst for the patients there will be a nursing home and a medical service which for efficiency, comfort, satisfaction, and reasonable charges will certainly not be surpassed by any first-class nursing home in London.

With regard to the charges for the various patients' rooms and the service, patients will have an alternative choice as to which they will be asked to pay: (1) a fixed price for the room, plus what are understood to be charges for the usual extras, and our charges for such extras will be based on an exceptionally moderate scale; or (2) an all-inclusive price (*a*) for the room, (*b*) fee for operating theatre, (*c*) dressings, (*d*) drugs, (*e*) special nurses if required.

[1] THE LANCET, 1928, ii., 729.

The patients will thus know, before they enter the Home, the exact cost of their stay per week, with no bill for extras on leaving. It is expected that the nursing home will contain about 200 patients' bedrooms, and each room has received careful consideration in the matters of lighting, heating, ventilation, and equipment. Representatives of the Medical Group, and the Directors of the Company, including the Architect, Mr. Biddulph-Pinchard, have visited numerous clinics, hospitals, and nursing homes in Sweden, Denmark, Holland, France, and also in this country to find the latest and best of everything for the good of the home in general and the patients, nursing and other staff in particular.

In harmony with the statement published in the prospectus issued to the shareholders last April, certain provision will be made for a number of rooms for people of moderate means. The *non-inclusive* charges for the more well-to-do patients will range from about £12 12*s*. or £14 14*s* a week, and up to about 30 and 35 guineas a week, and for this larger amount a patient will be provided with a private suite of rooms, so that if any relative desires to stay, or live in the home for a time with a patient, this can be arranged. Where an *all inclusive* charge per room is desired these prices will, of course, be increased.

The most careful attention is being given, by the Management Board and the Medical Group, to the service in the home. The choice and variety of the food to be provided, and its proper cooking and serving will be entrusted to members of the management whose technical skill, ability, and wide experience justifies full confidence, and as to the proper cooking we have already secured on our executive staff certain ladies of recognised standing in household and domestic science, with a wide range of practical experience in dietetics to meet the needs of any patients who are ordered special diets by their medical advisers. We shall also engage experienced chefs, and in making these appointments we have already been promised the help and advice of certain friends of our nursing home who are in a position to give practical effect to their advice. In fact these friends have promised to procure them for us.

It remains to refer to the appointment of the matron and the selection of nurses. As to the appointment of matron we shall have a wide choice, for already we have received applications from many candidates. With regard to the nursing staff, of a total number well over 120, we think there is need to strike out on new and better lines to secure the best and most experienced nurses for whom there will be a hostel in a suburb within a reasonable distance of the home. In the general running of the hostel we shall aim at making the nurses comfortable and creating such an atmosphere as will make it less of the usual institution and more of a home from home.

In Greater London we have a population of 8 to 10 millions of people constantly swelled from the provinces and by foreign visitors; with the resources to draw upon, which I have mentioned, we think that the service we shall provide will command success.

I thank you, Lord Moynihan, on behalf of the Company and the Medical Group for the toast you have so kindly and gracefully proposed, and to you, my Lords, Ladies, and Gentlemen, for the way you received the toast.

Dr. Moreland McCrea, Chairman of the Medical Group, said: It is a curious fact that while we have in London establishments unsurpassed in the world in efficiency and comfort for the treatment of the sick poor, no such provision has been made for those who are able to pay for treatment, though the latter provide the necessary funds. However creditable it may be to our charitable instincts that we provide in our hospitals, as a free gift, every resource that modern methods can devise for the investigation and treatment of disease, it is scarcely a tribute to our common sense that we exclude all but the objects of benevolence from these very resources. With the advance of medical science there has arisen a demand for an elaborate equipment which can scarcely be provided by individuals, and for a coöperation, never thought of in the older methods of practice, between specialists in different branches. The introduction of such an equipment and coöperation into private practice is everywhere recognised as imperative to practical progress. It is just ten years since some of us met to discuss this difficult problem. The obvious answer was to erect a building fully equipped for the investigation and treatment of disease, on the lines of a modern hospital, with rooms to suit the means of all classes of paying patients, and with adequate laboratories. If to such a building there could be attached a block of consulting-rooms occupied by consultants representing every branch of medicine and surgery we felt that an ideal solution would be obtained. We imagined that we had only to give to a cause so meritorious our blessing for the financiers in the City of London to open their coffers and supply the necessary funds. We were, however, soon disillusioned. No matter how meritorious our scheme the City would not take us on trust, and we found that it was useless to expect their help unless we were prepared to take some financial risk in the undertaking. As this was contrary to all medical ethics in this country our negotiations came to an end.

The fact that we are to-day in a more fortunate position is due to the enlightened enterprise of a distinguished group of business men, who have been able to grasp both the importance of our objects and the difficulty of our professional position. They have generously taken upon their shoulders the whole financial responsibility of the undertaking, only asking us to take the 99 years' lease of the block of 36 consulting-rooms in a building closely adjoining the nursing home. To them we owe the fact that our dreams are about to be realised and that we shall shortly see in actual being the great building of which your Grace has to-day so kindly laid the foundation-stone. The statement I have just made concerning the financial position represents the only monetary transaction undertaken by members of the Medical Group. They have also agreed to supply a committee to work in an honorary and advisory capacity with the Company, in a similar manner to the medical committee of all our large hospitals.

Speaking for the benefit of those who are unable to be present at to-day's ceremony, I may say that the site chosen for the building is situated on the south side of the Marylebone-road, and is bounded on the west by Devonshire-place and on the east by Harley-street. We have been asked why such a site should have been chosen in preference to one further afield, and we have been told that in such a position it will be impossible to eliminate noise. But a site in the chosen neighbourhood was essential, and we are satisfied that the rooms occupied by patients will be quiet and free from disturbance. These rooms will face not on the Marylebone-road, but on the south, south-east, and south-west frontages. The rooms facing on the Marylebone-road will be used for administrative purposes. Between the latter and the former there will be a long corridor 10 feet wide, and in this way the patients' rooms will be entirely protected from the noise of traffic. The goods entrances, including that for milk, will be on the Marylebone-road side. To secure privacy for the admission of patients by ambulance a special entrance has been arranged on the south side. The entrance of the nursing home will be in Devonshire-place.

The building will contain 200 beds. It has been designed with the utmost care, after literally years of study, by an architect who is unique in the attention which he has devoted to this particular problem, in constant consultation with the Medical Group and with the directors of the company. In order to obtain the very latest information on modern hospital practice, a committee of the directors and the members of the medical group has visited the most modern

hospitals in Sweden, Denmark, Holland, and France, and we are convinced that this hospital will set an entirely new standard in design and equipment. A wide range of accommodation between small single rooms and large suites will meet the varying requirements of patients, but in every single instance the standard of comfort will be the highest attainable, and special attention has been paid to small amenities. Two features in the staffing of the hospital will add greatly to the comfort of the patient. The nursing staff will be sufficiently large to enable us to supply special nurses, usually a costly item, at a very low charge, and there will be two resident medical officers who can be called upon at any moment of emergency. In regard to the latter we desire it to be clearly understood that these resident medical officers will in no way usurp the authority of the patient's own medical adviser. It is an essential part of our conception that the patient should still remain in contact with his regular medical adviser, for we consider this of the utmost importance for the continuity of treatment.

The hospital will be open to the patients of any medical man whose name is on the Register of the General Medical Council, but it will be appreciated that the Group must have the first call upon empty beds. Should consultation be required, there will be the perfect freedom of choice which exists elsewhere to-day. The laboratories, X ray department, and dispensary, all of the highest class, will be at the service of all surgeons, physicians, and general practitioners who have patients in the hospital, on an equal footing with the members of the Group. The occupants of the consulting-rooms will see all their patients on the usual basis of individual practice, having the advantage of proximity to the hospital, its X ray equipment, and its laboratories. There is no moral, legal, or verbal agreement in existence or contemplated for any tenant to employ in a consultative capacity any other tenant in the building. There will be absolute freedom of choice in every respect as it exists to-day. A plan is under consideration by which the combined efforts of these tenants can be placed at the disposal of the medical profession for that large class of patients which is just outside the limit for receiving hospital benefits. The Company have agreed to place at our disposal some beds for this purpose at a low figure. It would be possible to arrange a composite fee in order to include all form of examination and treatment for these patients, and in this way all the advantages of combined work could be brought within the reach of a large deserving class of patients.

Such, Your Graces, My Lords, Ladies and Gentlemen, is our policy and our scheme. May your good wishes be fulfilled, and on behalf of the Group I thank you.

"The health of the Duchess of Atholl" was proposed by Sir Lenthal Cheatle, and was drunk with acclamation, after which Mr. B. H. Binder proposed the toast of "The Guests," to which Lord Greenwood replied. The proceedings closed with a toast proposed by Dr. Beddard, wishing prosperity to the Chairman of the scheme.

SECOND INTERNATIONAL MALARIA CONGRESS.

In 1925 a committee of Italian malariologists including Drs. Marchiafava, Ascoli, Bignami, Bastianelli, Dionisi, and Gosio, initiated and organised a "First International Malaria Congress" which was held at Rome in October of that year under the patronage of the Italian Government. One of the resolutions passed was that there should be a second International Congress in 1930, which would be the fiftieth anniversary of Laveran's discovery of the malaria parasite, and that it should be at Algiers, where the discovery was made. Arrangements for this Congress have now been completed under the authority and patronage of the French Government. It will be held at Algiers from May 19th to 21st, with Prof. Mesnil as president. The following subjects will be discussed: (1) the parasitology of malaria (including therapeutic malaria from the parasitological point of view), (2) anopheles mosquitoes, (3) epidemiology and endemiology, (4) pathology, (5) quinine and other alkaloids and drugs in therapy, and (6) prevention and control. Communications should be in English or French and should be sent so as to arrive at the general secretariat of the Congress (Pasteur Institute, Algiers) before Dec. 31st. They will be printed and distributed to members before the opening of the Congress. Members of the Congress will include, in addition to representatives of Governments and institutions, all medical men, biologists, biochemists, and engineers who desire to participate. Applications for membership of the Congress should be sent before Jan. 15th, 1930, to the secretary-general of the Congress (Dr. L. Parrot, Pasteur Institute, Algiers, Algeria), accompanied by a postal order for 100 French francs. This subscription will entitle the member to take part in all meetings and official receptions of the Congress, to receive a printed copy of the Transactions, and to benefit by the reduction of fares allowed by the French railways and shipping companies. There will be optional excursions on May 22nd, 23rd, and 24th.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

Surg. Comdr. J. M. Gordon is placed on the Retd. List with rank of Surg. Capt.

Surg. Lt.-Comdrs. F. L. H. MacDowel and A. W. McRorie to be Surg. Comdrs.

The following appointment is notified: Surg.-Lt. T. W. Froggatt to *Devonshire*.

ROYAL ARMY MEDICAL CORPS.

Lt. A. T. H. Marsden is secd. for serv. with the Sudan Def. Force.

ARMY DENTAL CORPS.

Capt. D. H. W. Williamson to be Maj.

Lt. J. J. Seaton to be Capt.

ARMY RESERVE OF OFFICERS.

Lt.-Col. G. J. S. Archer, having attained the age limit of liability to recall, ceases to belong to the Res. of Off.

SUPPLEMENTARY RESERVE OF OFFICERS.

G. F. Walker to be Lt.

TERRITORIAL FORCE.

Lt.-Col. F. G. Lescher to be Bt. Col.

Maj. D. S. Martin, R.A.M.C., to be Divl. Adjt. 46th (N. Midland) Div.

Maj. W. C. MacKinnon, R.A.M.C., to be Divl. Adjt. 50th (Northumbrian) Div.

Capt. J. D. Hart to be Maj.

D. M. Dunlop to be Lt.

TERRITORIAL ARMY RESERVE OF OFFICERS.

Capts. A. N. Smith, H. Miller, and H. S. Allen, from Active List (supern. for serv. with O.T.C.), to be Capts.

ROYAL AIR FORCE.

The undermentioned Flying Officers are promoted to the rank of Flight Lt.: D. A. Wilson, F. E. Lipscomb, M. Clancy, C. P. O'Toole, G. H. J. Williams, S. B. S. Smith, V. V. Brown, J. F. McGovern, and W. Heron.

Lt. C. M. Leckie (General List, Army, Dental Surgeon) is granted a temporary commission as a Flying Officer (Dental) on attachment to the R.A.F.

Capt. R. E. Edwards (Army Dental Corps) is granted a temporary commission as a Flight Lt. (Dental) on attachment to the R.A.F.

Flight Lt. P. P. Hogan (Capt. Army Dental Corps) relinquishes his temporary commission on return to Army duty.

INDIAN MEDICAL SERVICE.

Capt. Ajab Singh Garewal to be Maj.

The probationary appts. of the undermentioned officers are confirmed:—To be Capt.: S. Hartley. To be Lts.: J. Acheson (now provl. Capt.), K. H. A. Gross, Shankar Sahai Bhatnagar, Bijeta Chaudhuri, E. V. Claydon, C. F. J. Cropper, V. H. Sarland, J. P. J. Little, E. A. O'Connor, and P. L. O'Neill.

Obituary.

LAURENCE BALL, *M.C.*, M.D., F.R.C.P. LOND.

WE regret to announce the death of Prof. Laurence Ball, which occurred at his consulting-rooms in Birmingham on Nov. 20th from an attack of angina pectoris which was the first and only manifestation of any cardiac disease.

Laurence Ball was born in Birmingham in 1884, his father being an architect in that city. He received his medical education at the University of Birmingham, and in 1907 graduated in Medicine in the University of London, where he later secured the gold medal in the examination for the M.D. After holding resident appointments, both medical and surgical, at the Birmingham and Midland Hospital for Sick Children, he served for a year as house physician at the Queen's Hospital, and for another year as resident medical officer at the General Hospital. He then went to London for post-graduate study in medicine, and took the diploma of M.R.C.P. in 1911. Not long afterwards he was appointed pathologist and assistant physician to the Queen's Hospital, where, in 1926, he became full physician. At the time of his death he was also physician to the Children's Hospital and to the Birmingham and Midland Hospital for Diseases of the Nervous System. At one time he was lecturer in pathology in the University, and in 1926 he was appointed joint professor of medicine. Two years later he was elected a Fellow of the Royal College of Physicians of London.

DR. LAURENCE BALL.
(*Photograph by Whitlock.*

Dr. Ball took a keen interest in pathology, and his sound practical knowledge in this department was often of great benefit to his colleagues. He was also much interested in medico-legal matters. Mr. Bertram Lloyd, to whom we are indebted for biographical details, says of him that he "was throughout devoted to his work, and took the greatest delight in it. The freshness and enthusiasm with which he would enter into the consideration of a knotty case or medico-legal problem was a constant source of stimulation to his colleagues. Although a very busy physician, he could always find time for another duty, and never appeared to be in a hurry. His patients had an affection for him which it is difficult adequately to describe. His professional manner inspired at once confidence, respect, and admiration for his wise judgment. Although much in request as a physician, it was as a teacher in the Medical School that he was pre-eminent. An eloquent speaker and a lucid teacher, his knowledge never seemed to fail him on any point. The students of the school crowded to his classes and held him in the highest regard. On personal grounds he was immensely popular. He was entirely devoid of vanity or affectation, and was possessed both of a deep fund and a keen appreciation of humour. Although temperamentally of a quiet and studious nature, he was constantly sought after by colleagues and students because of his attractive personality."

Dr. T. L. Hardy writes: "May I add my tribute to the memory of Laurence Ball, whose untimely death has removed from the ranks of the profession a sound physician and teacher of medicine, and a most lovable personality. I have enjoyed the privilege of his friendship for a matter of ten years, time enough in which to appreciate his many sterling qualities, for he combined in rare measure great modesty, charm of manner, and a love of the beautiful things in life and no less of its simple pleasures. He had a great capacity for friendship, a generous tolerance of the shortcomings of others, and he spoke ill of no man.

"Ball was a man of retiring disposition, rarely obtruding his opinions, but never failing those—and they were many—who sought them... He undoubtedly enjoyed life to the full, loving especially the big open spaces, and was never so content as when tramping among the hills of Cumberland or Wales with his friends. On such holidays his companionship was a thing of delight, for he was a man of wide culture and could talk with learning on many topics. He was, too, an amateur photographer of distinction, and his keen sense of beauty resulted in work of very high artistic merit. With children he possessed something akin to genius, and the joy his company brought to many families is a thing not easily forgotten.

"Ball contributed but little to medical literature and to research, holding the view that these things interfered with the proper discharge of his teaching duties, and it was to these that his energies were mainly devoted during the all too brief span of life allotted to him. As a teacher he was outstanding, whether in the lecture theatre, at the bedside, or in the post-mortem room, while his presentation of a case at a medical society was a model of lucid exposition. He was no specialist, indeed he heartily disliked the term, but was possessed of a wide knowledge of medicine in all its branches, knowledge which had been built up during many years in the post-mortem room. He was in the fullest sense of the term a general physician possessed of a maturity of judgment remarkable for one of his years. Yet though he has been taken at the outset of a brilliant career and has left behind him no written record of endeavour, his memory will endure in the hearts of his many friends, the students he loved to teach, and the patients, old and young, whom he delighted to serve."

In the course of service abroad in France and Italy during almost the whole of the late war, Dr. Ball was awarded the Military Cross, and was mentioned in General Plumer's dispatches for gallant and distinguished service in the field. He was unmarried, and is survived by his father.

TENBURY COTTAGE HOSPITAL.—This institution, founded in 1867, has been closed, and the building, which is expected to produce £1000, is to be sold. A committee has been appointed to consider the application of this sum and the £2000 of invested funds with a recommendation to give preference to home nursing purposes. The reason assigned for the closing of the hospital is the reduction in the number of patients caused by the introduction of the Worcester Hospital Contributory Scheme.

QUEEN MARY'S HOSPITAL FOR THE EAST END.—There was an unusual incident at the annual festival dinner of this hospital at which the Duke of Gloucester presided last week. It was desired to raise £10,500, and the donations announced amounted to £10,478. It was suggested that two of the guests should toss for the privilege of providing the balance of £22. The Lord Mayor and Sir Leonard Lyle, the chairman of the hospital, tossed for £10 and the Lord Mayor lost. The Duke of Gloucester and Sir Leonard then tossed for the remaining £12, and the Duke had to pay.

Correspondence.

"Audi alteram partem."

MALARIA TREATMENT OF GENERAL PARALYSIS.

To the Editor of THE LANCET.

SIR,—Before the introduction of Wagner von Jauregg's treatment of general paralysis a terminal stage of this disease, characterised by extreme emaciation in spite of adequate nourishment, was common. I have seen as many as four cases exhibiting this condition in bed in hospital at one time. Kraepelin attributed the condition to endocrine disturbance. Reichardt is more definite and attributes it to a specific degeneration in the vegetative trophic centres in the hypothalamic region. It is our experience at Whittingham that this "conspicuous body-wasting termination" of general paralysis never occurs following malaria treatment. In the mass of medical literature on this subject I do not find this fact mentioned, and think our experience worth recording as it may, or may not, be confirmed, and the observation may help to explain the mode of action of malarial therapy concerning which so many theories have been advanced.

I am, Sir, yours faithfully,

R. M. CLARK.

Whittingham Mental Hospital, Lancashire, Nov. 25th, 1929.

ROSS AWARD FUND.

To the Editor of THE LANCET.

SIR,—Those of your readers who have subscribed to the Ross Award Fund will be interested to hear that the officer commanding the First Battalion, the Sikh Regiment at Razmak, Waziristan, India, has kindly sent a cheque for £15 towards the Fund, the amount having been chiefly subscribed by the men of that Battalion who willingly gave it from their pay (which is scarcely large). The O.C. goes on to explain that this fund is of particular interest to the Battalion because not only did Sir Ronald's father—General Sir Campbell Ross—command the Battalion as Colonel, when it was known as the 14th Sikhs, when Sir Ronald was born in India, but also Sir Ronald's brother—Captain C. Ross—was killed while serving with this Battalion in connexion with the Chitral Campaign. This Sikh Corps has been always celebrated as an extremely fine body of men who have faithfully helped this country in many campaigns.

Your readers will be further interested to know that the Fund has now reached £10,619 3*s.* 7*d.*, of which the *Straits Times*, Singapore, have contributed £3362 19*s.* 10*d.*, and the *Malayan Daily Express* Fund £75 15*s.* 4*d.* Donations should be sent to Lloyds Bank, Ltd., 110, High-street, Putney, S.W.15.

I am, Sir, yours faithfully,

JAMES BARR,
Chairman of the Ross Award Fund Committee.

Hindhead, Surrey, Nov. 24th, 1929.

THE ROYAL FREE HOSPITAL V.D. CLINIC.

To the Editor of THE LANCET.

SIR,—An annotation in your issue of Nov. 16th (p. 1053) speaks of the Royal Free Hospital Female V.D. Clinic as dealing with a considerable number of prostitutes. This belief about the Clinic is fairly widespread, I have met it in one quarter and another during the past five years, and it is quite wrong. If we can be said to specialise in any type of case, it is that of the unmarried mother, infected or probably infected, and for this reason referred to us by various social workers and philanthropic agencies from all parts of the country. The overwhelming majority of such cases are servants, domestic or hotel, and waitresses, and one of the rules of our hostels to which such cases are admitted is: "Save under exceptional circumstances remand cases or prostitutes are not suitable for admission to these hostels"—this for the guidance of social workers sending up cases.

We have, of course, a very considerable family attendance of married women and their children and a special clinic is held on Wednesdays from 2 to 4 P.M. for doctors' cases referred particularly to myself. During these hours married women only are seen. This is *not* to prevent their mixing with prostitutes, as may be suggested, but so that they may not be kept waiting on their first visit, especially as many of these are pregnant or recently delivered.

I apologise for intruding on your valuable space but must endeavour to remove this misconception, lest doctors fear to refer married women and children to the department in case they be offended by the type of patient waiting to be seen at the same time. There does not seem to be any V.D. clinic to which professional prostitutes go in any numbers. Whether this is because they have other arrangements or because, save in the richer circles of the demimonde who can, of course, afford private treatment, they are being ousted almost entirely by the amateur I do not know; but the fact remains that the professional prostitute is very rarely indeed met with in my clinic.—I am, Sir, yours faithfully,

MARGARET RORKE,
Director of the Female V.D. Department,
Nov. 25th, 1929. Royal Free Hospital.

THE TEACHING OF RADIOLOGY.

To the Editor of THE LANCET.

SIR,—"Seeing is believing" is almost a fetish among Americans; they are always seeking means of visualising disease. In England we rely almost exclusively on clinical methods, employing such a magnificent aid to vision as radiology only when destitute. The radiologist's or radiographer's task is to correlate, revise, and if necessary correct the clinical diagnosis in the *early* stages of disease.

Why does radiology persist in taking a back place here in England? Surely it is because the general practitioner has no means of learning what it will do that he does not seek its aid. For those specialising in the science there are excellent courses; these courses, like most text-books, deal chiefly with technique, which is just what the general practitioner does not want. There is a sharp distinction between those who know what radiology will do and those who can actually take the films. The most striking advances during the last ten years have not been by technicians but by clinicians with a knowledge of the capabilities of radiology; vide the use of lipiodol and sodium phenoliodophenolphthalein. One has only to scan the last few years LANCET's to realise what a price surgeons put on radiology. Morriston Davies's "Surgery of the Lung and Pleura" is essentially clinical but half the illustrations are radiograms demonstrating pathological processes; one can see the progress of a disease in these radiograms in a most beautiful manner. This is the "pathology of the living."

The British Institute of Radiology is the proper and obvious place for such lectures to post-graduates; it is doubtful whether the student should be burdened with more lectures. Half a dozen lectures are all that are necessary to learn the principles on which to build up one's knowledge. The Council of the Institute, however, are afraid that there would be a mushroom growth in the number of installations to the detriment of radiology. This need never happen, since technique need not and should not be mentioned. The word "technique" is a perfect bug bear to the general practitioner. It alarms and deters him; he imagines that all sorts of abstruse electrical problems beset him. Technique should and will always be left in the hands of those who are prepared to undergo the

necessary training, as only good radiograms are worthy of and capable of interpretation.

A fortune is being spent abroad on the purchase of radium. Now radium is a double-edged sword; experts admit that they are only on the threshold of knowledge; whereas radiology is a very exact science resting on sound footings. If one-tenth of the money being spent on radium was devoted to the teaching of radiology, thousands of lives would be made more comfortable and years would be added to still more thousands—especially cancer patients, because by recognising the disease in its early stages, as radiology can, operations could be done before the outlook was hopeless.

In London there is a professor of almost every conceivable tongue, art, and science except radiology. Surely some benevolent body will come to the rescue and endow chairs and lectureships? If they do not, surely it is the State's duty to the National Insurance Fund to provide practitioners with facilities for learning what radiology will do.

I am, Sir, yours faithfully,

Harley-street, W., Nov. 24th, 1929. A. P. BERTWISTLE.

DIAGNOSIS OF GASTRIC DISEASE.

To the Editor of THE LANCET.

SIR,—Dr. J. A. Ryle, in his closing remarks at the discussion of the Medical Society of London upon the Relative Value of the Different Methods of Diagnosis of Gastric Disease, is reported as saying that "the chief symptoms of carcinoma—anorexia, anæmia, and fever—were clinical, but the other methods should not be neglected" (THE LANCET, Nov. 16th, p. 1043). May I point out that by means of radiological examination carcinoma of the stomach can be detected before it gives rise to anorexia, anæmia, and fever. A carcinoma giving rise to these symptoms is invariably in an advanced stage of growth and produces a filling defect in the outline of the stomach which with careful radiological examination could be detected when a tenth or less in size. Indeed, it is possible by means of X ray examination to detect a growth of the stomach in the early stage of development.

I suggest that every patient over the age of 35 years who is complaining, for the first time in life, of gastric symptoms, should, before any treatment is given, have his or her stomach examined radiologically, with a view to determining the presence or absence of carcinoma. If this procedure is adopted, many cases of gastric cancer will be detected at any early stage of the disease, with a correspondingly more hopeful outlook for the patient.—I am, Sir, yours faithfully,

Leeds, Nov. 21st, 1929. W. H. ROWDEN.

THE SALARIES OF PUBLIC APPOINTMENTS IN SCOTLAND.

To the Editor of THE LANCET.

SIR,—Some time ago the Scottish Committee of the B.M.A. recommended the adoption of a modified scale of salaries in Scotland, it being understood that the Scottish Board of Health (now Department of Health) would back up these proposals officially. No very satisfactory reason was given to explain why salaries in Scotland should be lower than in England. It was suggested that Scotland is a poorer country (?) but that argument might just as well be held to apply to the panel capitation fee or any other form of remuneration for work under the State.

At the Representative Meeting of the B.M.A. where this proposal was finally adopted, it was argued that by starting somewhat lower the Scottish public health official would finish somewhat higher in the matter of salary than his English colleague, but as the English minimum for assistant medical officers is £600 and the Scottish scale is supposed to average £600 over a period of ten years, it is rather difficult to see where the Scottish official's advantage comes in. There were, of course, opponents of the scheme who knew perfectly well that if the scale were lowered certain Scottish local authorities would bid still lower. This is exactly what has happened, and it can only be a matter of time before other forms of remuneration, including the panel, are affected.

There have recently been a number of advertisements in the lay press for appointments (mostly under education authorities) offering salaries well below the modified scale which, be it noted, the Scottish Central Authority had promised to support. An example is Ayrshire Education Authority, which on Nov. 9th advertised for a whole-time assistant school medical officer with the D.P.H. and, if possible, experience in general practice at a salary of £450, rising by £20 to £550 with £50 travelling allowance. Thus at the end of six years the person foolish enough to accept this appointment will still be £50 below the B.M.A. minimum in England, besides probably being well out of pocket over the travelling. It is inconceivable how any local authority of importance can hope to get a medical man or woman who is any use at the work to come for such a salary; it looks almost as if some local authorities do not care how the work is done provided a certain amount of paper is filled up. The Scottish Health Department has in its hands the final confirmation of these appointments and their conditions, and it is up to the department to keep its bargain.

At the present time there is little inducement to go in for public health in Scotland, whatever platitudes Ministers and politicians may mouth about it. We are everlastingly being told of the value of school medical inspection and other public health work, but apparently this work can be done by anyone for the most paltry financial reward.

In Scotland the Public Health Service is particularly unfortunate in having very few men of outstanding character and determination in its ranks; many are not interested in the welfare of the Service as a whole or in the conditions under which assistants are asked to work. Moreover, the big cities set a bad example by appointing local graduates as a rule who may be able to accept low salaries for private reasons.

I am, Sir, yours faithfully,

Nov. 23rd, 1929. D.P.H.

Public Health Services.

MENTAL HOSPITAL REPORTS.

THE *West Riding Mental Hospital* at *Wakefield* publishes its 110th report, for the year 1928. There were 2350 patients on the register at the end of the year. The recovery-rate was 21·3 per cent., and the death-rate 8·2 per cent. Post-mortem examinations were held in 88·6 per cent. of possible cases. One case of typhoid fever occurred, and a carrier was detected. There were six cases of dysentery and four carriers were found, three of them having given a negative reaction when undergoing the routine test on admission. General paralysis has been treated with tryparsamide, and some of the cases have shown improvement. On the whole, the medical superintendent thinks that this drug may be said to have had a specific curative action on cases treated early enough. Two new clinical rooms and a new preparation room in the laboratory have been built, and a special room has been set aside for light therapy. The out-patient department served 58 new patients during the year. As many as 50 patients were allowed out on trial before discharge, and 49 of them were given money allowances. Parole was granted to 41 men and one woman beyond the estate, and to 169 men and 537 women within the grounds. One nurse obtained the nursing certificate of the General Nursing Council.

The *West Riding Mental Hospital* at *Storthes Hall, Kirkburton*, had 1246 patients on its books at the end of last year. The death-rate was 9·1 per cent., and

post-mortem examinations were made in 90·8 per cent. of cases. The death-rate from tuberculosis is 2 per cent. lower than it was in 1927, having come down to 6 per cent. The recovery-rate was 21 per cent., the lowest for many years. The medical superintendent attributes it to the large number of incurable patients admitted during the year. No less than 14 per cent. were idiots, imbeciles or epileptics. The number of patients usefully employed has been maintained, and the privilege of parole has been extended; a number of discharged patients were granted money allowances. There were three cases of typhoid and twelve of dysentery. General paralysis was treated with malaria for the first time last year, and six out of thirteen patients were improved, four being discharged. A visiting dentist has been appointed. All the patients admitted now have their blood examined by the Meinicke turbidity and Wassermann tests. The Meinicke reaction gave the same number of positive results as the Wassermann in 96 per cent. of cases, and seems to be a valuable auxiliary. The laboratory is now equipped to undertake all necessary investigations, and works in close correlation with the wards. During the year twelve attendants and nine nurses passed the final examination for the R.M.P.A. certificate. Of the present staff, 41 attendants and 21 nurses are certificated, and four attendants and five nurses are registered.

Wilts. County Mental Hospital.—There were 1146 patients on December 1st, 1928. The death-rate was 8·2 per cent. and the cause of death was verified by post-mortem examinations in 81·2 per cent. of cases. The recovery-rate was 25·8 per cent.; all but four patients discharged had a preliminary period of trial, 23 of them with a money allowance. The general health was good and there was no epidemic disease, but there were 23 cases of dysentery, one of paratyphoid B, and six of erysipelas. The out-patient clinics at Swindon and Trowbridge served 52 and 27 patients respectively. The housekeeper has had very good results in occupational training for the low-grade female patients. Eight nurses obtained their R.M.P.A. certificate during the year.

The *Inverness District Asylum* housed 720 patients on May 15th, 1929, while another 16 were out on probation. The recovery-rate for the year was 25·4 per cent., and the death-rate 10·7 per cent. Phthisis and senile decay accounted for more than half the deaths. On the whole the health of the patients was good, but there was an epidemic of influenza in the spring, and some cases of scarlet fever. The drought caused a very serious water shortage, but the new reservoir, completed last year, saved the situation. The medical superintendent expresses anxiety about the state of the hospital building, and thinks that the further hospitalisation of the institute requires careful consideration. A cinematograph apparatus was installed last October, and has been much appreciated. The visiting commissioner urges the provision of a workshop for occupational therapy, and of a comfortable detached home for the nurses, ten of whom gained their R.M.P.A. certficate during the year.

Lancashire and Cheshire Society for the Permanent Care of the Feeble-Minded.—The 30th annual meeting of the Society was held this year. There are now 103 women and 34 girls in the colony, and 132 men and 94 boys. One girl and two boys died during the year. There was a succession of epidemic diseases, but most of the patients made a good recovery. Sandlebridge receives patients from all over the country, and 234 of its patients have been in residence since they were small children.

INFECTIOUS DISEASE IN ENGLAND AND WALES DURING THE WEEK ENDED NOV. 16TH, 1929.

Notifications.—The following cases of infectious disease were notified during the week:—Small-pox, 172 (the same last week); scarlet fever, 3227; diphtheria, 1759; enteric fever, 51; pneumonia, 1192; puerperal fever, 59; puerperal pyrexia, 109; cerebro-spinal fever, 10; acute poliomyelitis, 12; acute polio-encephalitis, 3; encephalitis lethargica, 17; dysentery, 15; ophthalmia neonatorum, 89. No case of cholera, plague, or typhus fever was notified during the week.

The number of cases in the Infectious Hospitals of the Metropolitan Asylums Board on Nov. 19th–20th was as follows:—240 under treatment, 17 under observation (last week 195 and 9 respectively), scarlet fever, 2833; diphtheria, 2686; enteric fever, 96; measles, 306; whooping-cough, 114; puerperal fever, 31 (plus 12 babies); encephalitis lethargica, 125; poliomyelitis, 8; "other diseases," 17. At St. Margaret's Hospital there were 9 babies (plus 4 mothers) with ophthalmia neonatorum.

Deaths.—In the aggregate of great towns, including London, there was no death from small-pox, 4 (3) from enteric fever, 29 (8) from measles, 9 (1) from scarlet fever, 12 (2) from whooping-cough, 38 (5) from diphtheria, 82 (16) from diarrhœa and enteritis under two years, and 75 (12) from influenza. The figures in parentheses are those for London itself.

The single death from enteric fever outside London was reported from Birmingham. Diarrhœa accounted for 7 deaths at Manchester, 6 at Birmingham, and 4 at Liverpool. There were 5 deaths from diphtheria at Liverpool; 3 deaths from measles at Bolton and Oldham, 2 each at Wolverhampton and Manchester.

The number of stillbirths notified during the week was 274 (corresponding to a rate of 47 per 1000 births), including 38 in London.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

HIGHLANDS AND ISLANDS MEDICAL SERVICE.

THE House of Commons went into Committee on Nov. 19th on the following money resolution in connexion with the Highlands and Islands (Medical Service) Additional Grant Bill:—

That, for the purposes of any Act of the present session to make provision with respect to an additional special grant for the purpose of improving medical service in the Highlands and Islands of Scotland, it is expedient to authorise the payment to the Highlands and Islands (Medical Service) Fund, in addition to the sum of £42,000 payable to the Fund under Subsection (1) of Section (1) of the Highlands and Islands (Medical Service) Grant Act, 1913, of such sum as may be annually voted by Parliament for the purpose.

Mr. YOUNG, Chairman of Committees, was in the chair.

Mr. ADAMSON (Secretary of State for Scotland), in moving the resolution said that in 1913 Parliament made special provision for the payment of a fixed amount of £42,000 per annum for the purposes of the improvement of the medical service in the Highlands and Islands and for other purposes connected therewith. Since that date the fund had been of inestimable benefit to the people in the remote parts of Scotland. It has been found that an additional sum of money was necessary and this resolution was being proposed for that purpose.

Major ELLIOT said that the Members of the Opposition fully agreed with the object of the resolution, and in view of the lateness of the hour, and on the understanding that fuller opportunity would be afforded, if necessary, for a discussion on the matter at a later stage, they were willing to agree to the resolution. The services which the resolution covered extended to a little more than half the area of Scotland and those services had been kept up in recent years by utilising balances unexpended during the war. The time had come when a larger amount was necessary.

Mr. ERNEST BROWN signified approval of the resolution on behalf of the Liberal Party.

The resolution was agreed to.

On the following day the resolution was agreed to on Report, and the Highlands and Islands (Medical Service) Additional Grant Bill was brought in and read a first time.

ILLEGITIMATE CHILDREN (SCOTLAND) BILL.

On Wednesday, Nov. 20th, the Illegitimate Children (Scotland) Bill was read a second time.

EDUCATION (SCOTLAND) BILL.

On Tuesday, Nov. 26th, Major ELLIOT asked for leave to bring in the Education (Scotland) Bill, a measure to enable

education authorities in Scotland to incur expenditure in supplying milk to children attending schools within their area. He said that the Bill followed out the rather remarkable series of tests and experiments upon the value of adding small quantities of vital substances to the ordinary diet or food, more particularly of growing animals and persons, which had been one of the features of research in the last few years. The last few years had shown most clearly that although the diet might be adequate in amount, and even contained all that was usually supposed to be necessary to produce a healthy full-grown creature, yet if certain small quantities of substances were lacking, the growing creature, be it child or animal, would not be fully formed, would not reach full maturity. All the work that had been done on what had been known as the vitamins was a striking example of that. Carrying out that line of investigation in the United States and elsewhere, experiments were made on the value of adding a small quantity of milk to the daily ration, first of all of animals, and then of growing children, and very remarkable and interesting results were obtained. These experiments were carried further in this country by the Medical Research Council, which in 1926 carried out a series of tests on boys under more or less controlled conditions, and under the management and scientific supervision of Dr. Corry Mann. Those results showed quite clearly that a remarkable increase in growth and in health, and even if he might say so in intelligence, was the result of the addition of a small quantity of milk to the daily ration of growing children.

Scientific Tests.

In the autumn of 1926 the Scottish Administration, in which he had the honour then to play a certain part, brought this to the notice of the Empire Marketing Board on the ground that they should attempt to apply these results in Scotland and elsewhere in the United Kingdom, since here was an admirable chance of encouraging the use of home products. In the case of fresh milk particularly the home producer had a natural advantage and preference over all other producers of which it is impossible really to deprive him. There was thus an excellent chance of improving health and of stimulating home production, particularly in the field of agriculture in which stimulation was highly desirable and very necessary. Accordingly a grant was made from the Empire Marketing Board and the tests were conducted over two years, in 1926 and 1927. The results were really very striking and remarkable. They thought it desirable not to publish them at once but to verify the 1926 results by the 1927 repeat tests. The tests were carried out in seven large centres—Peterhead, Aberdeen, Dundee, Edinburgh, Glasgow, Greenock, and Paisley, and also in Northern Ireland in the City of Belfast. There were some 2000 children under observation. It was under full scientific supervision, conducted in the first case by Dr. Orr, of the Rowett Institute, and Dr. Cruickshank, of the Board of Health, and in the second case by Dr. Leighton and his assistants, also of the Board of Health, now the Department of Health for Scotland. The results showed that adding a small additional ration of milk to the diet of the ordinary school child in Scotland led after a seven months' addition of this small ration to the surprising result that the ordinary child which had received milk was a quarter of an inch taller and three-quarters of a pound heavier than the child which had not received the ration. This was not due simply to a deficiency in feeding, because the children who were not receiving an additional ration of milk were given an additional ration of biscuit to make up for the food value of the milk which had been given, so that the excellent results obtained by milk were, so far as one could see, purely due to the small additional quantities of vital substances found in milk, but not found in the biscuit ration given as an alternative. It was a further interesting point that the additional biscuit ration did not lead to any increase of growth, either in height or in weight, over the children who received no additional ration at all, which seemed to point quite clearly to the fact that those children, take it by and large, were receiving sufficient food—that was to say an extra biscuit did not increase either their height or weight—but that they were receiving food which was deficient in some respects and the making up of that deficiency by a small ration of milk produced this surprising result of greater growth in height, increase in weight, and improvement in health. It was very striking that all observers said there was a sleekness of the hair, a polished condition about the nails, and there was a certain boisterousness and rebelliousness about the children on the milk diet which was not found in the cases of the children receiving the biscuit diet.

The children were of all ages from the beginning of school age to the end of it, from children of 5 and 6 up to children up to 13. The interesting thing was that this applied not merely to necessitous children, but practically to all the children, and therefore it seemed that it was scientifically proved that the diet of the ordinary child could be greatly improved by a small alteration of quality. The ordinary law just now only applied to the giving of substances in the case of children who were actually necessitous, and the full necessitous provisions had to be observed—that was to say, there was a compulsion on recovery of cost and many semi-penal provisions with which no doubt Members of the House were well acquainted. Milk obviously occupied a position something between a drug and a food, and a great many parents who came under no definition of necessity might quite reasonably find that by working in with a scheme of a local authority it would be possible either on payment of a proportion of the cost, or on payment of all the costs, or on payment of none of the costs, as the flexible nature of the scheme which he (Major Elliot) desired to introduce would permit, that their children would be greatly improved in health, although in fact they would not come under any category of necessity. The Bill would have the immediate effect of modifying the rigid provisions requiring and demanding recovery of all the costs and the supply only in cases where the parent was proved to be absolutely negligent in his care of the health of his child.

A Sound Investment.

The cost of these things tried out experimentally ran to something like 1*d.* per child per day. That was the full cost, but he would not suppose for a moment that the full cost in the case of every child would be borne by the local authority. He could not imagine any better form of investment, or anything that would be of more immediate value to a child's chances in life. Necessitated no doubt by the profession to which he and some other hon. Members belonged, he was a little sceptical about the brain, but he was perfectly solid about the brawn. If they could make a healthy child, he was certain it would pick up a great deal of its own education, whereas an unhealthy child might receive no advantage from the most careful schooling they could possibly give it. There had been other experiments of a converging kind, proving the benefit of this one. They were able to carry out a certain amount of milk feeding in Africa, where the same criticism of boisterousness and even of rebelliousness was brought against the children who had the milk ration as against those who had not. He therefore said that here they had a chance of something which could be immediately put into operation, something which would, for the expenditure of every penny of it, benefit home production, benefit agricultural production, and which would be as these tests had shown, of considerable and lasting benefit to the children of this country. In Scotland they had perhaps a more convenient area for the further examination which he proposed than in England. In Scotland agriculture, education, and public health were all under one Minister. The Bill proposed that the local authority could incur expenditure for this purpose by submitting a scheme which would have the approval of the Department of Health and of Education. It was a practical and immediate step. It was not an extravagant step, but one which they could reasonably ask the House to give a first reading to in order to get the Bill printed. He hoped thereafter at an early date they might be able to remit the Bill to the Scottish Grand Committee to amend as necessary, and that eventually it would be placed on the Statute Book.

Leave was granted to bring in the Bill, which was then read a first time.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 20TH.

Visits of Medical Experts to the Colonies.

Dr. MORGAN asked the Under Secretary for the Colonies how many medical experts, as the result of organisational departmental changes, had visited and reported on particular colonies; how many colonies had been so visited; what special health and medical problems were investigated; and if any reports based on these visits or investigations were available to Members of Parliament.—Mr. LUNN replied: I am not clear as to what organisational departmental changes are in the mind of my hon. friend, but I give the following list of visits to the colonies by medical experts which have been arranged by the Colonial Office during the last few years: Sir Wilfred Beveridge, Bahamas and other West Indian Islands; Dr. A. E. Horn, Cyprus; Dr. J. Hope Reford, Falkland Islands; Dr. A. T. Stanton (Chief Medical Adviser to the Secretary of State), Nigeria, Gold Coast, Sierra Leone, and Gambia; and Lieut.-Colonel S. P. James, Kenya, Uganda, and Tanganyika. The reports of Sir Wilfred Beveridge and Dr. Horn are available to any hon. Member who may desire to see them, and the report of Colonel James on his visit to East Africa, which was specially concerned with malarial problems, will be available shortly. In the other two cases no special report was

issued. I may add that a Commission of the League of Nations recently investigated the general health problems of the Western Pacific Islands, and it is understood that their report will be published shortly.

Yellow Fever and Malaria.

Dr. MORGAN asked the Under Secretary for the Colonies whether the Rockefeller Foundation was still continuing in different colonies, in coöperation with the Colonial Medical Service, its investigations into yellow fever and also its malarial surveys; how many of the latter had been completed; and if any extension of the survey system was in contemplation.—Mr. LUNN replied: Yes, sir. I am happy to say that the International Health Division of the Rockefeller Foundation is continuing to coöperate with the local medical authorities in investigations into yellow fever in Nigeria and other West African Colonies. It is also coöperating in malarial surveys in various West Indian and Western Pacific Islands and in Palestine, and this work is still proceeding. I hope that it will be possible to extend the system of malarial surveys in coöperation with this organisation as opportunity offers.

International Commission on Sleeping Sickness.

Dr. MORGAN asked the Under Secretary for the Colonies whether the special International Commission on Sleeping Sickness was still continuing its investigations in Uganda; whether any report had been received or issued; what were the names of the present members of the Commission; and what was the total staff working under that Commission.—Mr. LUNN replied: The International Sleeping Sickness Commission appointed by the League of Nations for work in Uganda completed its labours in June, 1927, and its final report was published by the League in March, 1928. The latter part of the question does not therefore arise. I may state that an International Conference held in Paris a year ago to review the Commission's work approved the principle that the lines of investigation opened up by the Commission should be followed up by the Governments concerned with their own resources. Special organisations are now investigating problems in connexion with sleeping sickness not only in Uganda, but in the Tanganyika Territory, Nyassaland, Nigeria, and the Gold Coast.

Vitamin Contents of Cod-liver Oil.

Mr. REMER asked the Under Secretary for the Colonies what steps he was taking to make widely known the favourable report as to the vitamin contents of cod-liver oil, as the result of investigations by the Empire Marketing Board.—Mr. LUNN replied: The Empire Marketing Board has not yet received the report upon these investigations, and I am therefore not in a position to say what steps may be found suitable for making the results known.

Dispensing in the Army.

Dr. VERNON DAVIES asked the Secretary for War if he was aware that his department was the only service department which employed men who were not trained pharmacists for the dispensing of medicines; and, seeing that such men could not be employed to dispense for the civil population under the National Health Insurance Act and were not employed by the Admiralty or Air Force, would he look into the matter.—Mr. T. SHAW replied: The hon. Member is under a misapprehension. Although some pharmacists are employed under the Admiralty on this duty, all three Service departments employ dispensers who are not pharmacists but who are trained as dispensers and carry out their duties under the general supervision of medical officers. I am advised, so far as the Army is concerned, that the present arrangements are satisfactory.

THURSDAY, NOV. 21ST.

Accused Persons Suffering from Encephalitis Lethargica.

Mr. SORENSEN asked the Home Secretary whether he intended to take action to see that accused persons known to have suffered from encephalitis lethargica received appropriate medical treatment and were not treated as criminals.—Mr. CLYNES replied: As regards accused persons sent to prison on remand or awaiting trial, if the medical officer has reason to believe that they have suffered from encephalitis lethargica a report on their medical history and present condition is made to the court, and the decision as to the action to be taken rests with the court.

Mr. OLDFIELD: Will the right hon. gentleman look into the matter of the amount of institutional treatment available for children over 14 years of age?

Mr. CLYNES: That is a very different question.

Dr. VERNON DAVIES: Are any steps taken to inquire into the previous medical history of these people or do the authorities wait for some evidence to be given to them that the case is encephalitis lethargica before making inquiries?

Mr. CLYNES: I think that my answer implies that something in the nature of a medical history is brought into the court.

Mr. SORENSEN asked the Home Secretary how many persons were convicted of moral offences during the last 12 months; and how many of that number were known to have suffered from encephalitis lethargica.—Mr. CLYNES replied: The figures available do not fit in exactly with the terms of the question, but perhaps they will serve the purpose of my hon. friend. In the two years ended March 31st, 1929, 114 prisoners were found, or suspected, to be suffering from the after-effects of this disease. As regards 16 of them, whose first conviction was before the onset of the disease, only one was in prison for a sexual offence; as regards the other 98, whose first conviction was after the onset of the disease, 22, or nearly one-quarter, were in prison for sexual offences.

Prevention of Water Famine.

Mr. REMER asked the Minister of Health what steps he proposed to take to deal with the serious shortage of water in many localities during the drought of last summer.—Mr. GREENWOOD replied: I have already issued a memorandum urging water authorities to examine their position, in view of the drought and possible difficulty in the future, and indicating the measures to be taken. In my opinion, the most practicable procedure is the formation of Advisory Regional Water Committees, who will systematically survey the needs of their districts and recommend the best and most economical means of meeting them, and I am constantly urging the formation of such committees.

Superannuation of Local Government Officers.

Mr. RAYNES asked the Minister of Health how many local authorities had adopted the Local Government and Other Officers' Superannuation Act, 1922; how many had adopted it for officers and workmen and the number of each included in designated posts; and how many officers and workmen over 65 years of age were still employed respectively by local authorities who had adopted the Local Government and Other Officers' Superannuation Act, 1922, and by local authorities who had not adopted that Act.—Mr. GREENWOOD replied: On Nov. 1st, 1929, 683 local authorities had availed themselves of the provisions of the Local Government and Other Officers' Superannuation Act, 1922, and the number of posts designated as established posts by these authorities was approximately 127,500. No exact information is available as to the numbers of officers and workmen occupying such posts, but the Departmental Committee on Superannuation estimated that on Nov. 1st, 1927, the 102,000 employees then occupying established posts included 35,000 officers and 67,000 servants. I have no information as to the number of employees of local authorities whose age exceeds 65 years.

Mr. THORNE: Has the right hon. gentleman power to compel those local authorities who are refusing to put this into operation to do so?

Mr. GREENWOOD: Under the present law I have no power to compel local authorities. That matter was raised by the Departmental Committee which reported two years ago and is now under my consideration.

Approved Societies and Additional Medical Treatment.

Mr. MANSFIELD asked the Minister of Health whether he proposed to make any alteration or amendment to the National Health Insurance Act to enable approved societies to give financial assistance towards the cost of any form of treatment, benefit, or otherwise, that a member might require, with less than five years' membership.—Mr. GREENWOOD replied: An approved society which is found on valuation to have a disposable surplus may adopt a scheme for contributing towards the cost of various forms of remedial treatment required by its members, such as dental, ophthalmic, hospital, or convalescent home treatment. Hitherto such assistance has been restricted to persons who have been members of the society for about five years, but a regulation has already been made under which the qualifying period of membership will from January next be reduced to two and a half years on the average.

Local Authorities and Rheumatic Diseases.

Dr. VERNON DAVIES asked the Minister of Health what grants, if any, were paid by his department to local authorities for the investigation or treatment of rheumatic diseases, especially among children.—Mr. GREENWOOD replied: Grants are available under the Maternity and Child Welfare Regulations for the experimental investigation and treatment of acute rheumatism in children under school age, but I am advised that this condition is rare amongst very young children. I understand that the Board of Education pay grants for similar purposes in the

case of children of school age, and that the Medical Research Council make grants for researches into rheumatism.

Viscountess ASTOR: Does the right hon. gentleman not think that the best way to deal with delicate children is to establish nursery schools?

Lieut.-Colonel FREMANTLE: Have the efforts of these three departments been coördinated in any way?

Mr. GREENWOOD: They are within the knowledge of the three Ministers concerned.

Lieut.-Colonel FREMANTLE: Cannot the three Ministers coöperate?

No further answer was given.

Bacteriological Examination of Milk.

Sir RENNELL RODD asked the Minister of Health whether, in view of the large number of deaths of infants from bovine tuberculosis, traceable to milk, recorded annually in medical reports, he was satisfied that the powers of supervision and control vested in local councils were duly exercised by them; and, if not, whether he would consider measures for their stricter application.—Mr. GREENWOOD replied: I am satisfied that local authorities generally are exercising their powers of supervision and control in an efficient manner, having regard to such difficulties as are caused by the mixing of milk and the delays necessarily involved in obtaining reports on bacteriological examinations. The matter will, however, continue to receive my careful attention.

Dr. VERNON DAVIES: Is the right hon. gentleman aware that the bacteriological examination of milk for tubercle is hopelessly inadequate in this country?

No further answer was given.

River Pollution.

Mr. FREEMAN asked the Minister of Agriculture whether, in view of the growing and serious menace of river pollution all over the country and of the inadequacy of existing powers to deal with it other action was contemplated. Mr. GREENWOOD (Minister of Health) replied: The whole question of river pollution is at present under consideration by the Joint Advisory Committee on River Pollution, and in particular they are considering measures to prevent pollution by trade effluents. They have issued a preliminary report in which they express the opinion that much more can be done, under existing powers, through the appointment of joint committees by the councils of counties and county boroughs. I am urging the authorities to set up such bodies.

Vaccine Lymph.

Mr. FREEMAN asked the Minister of Agriculture where and how Government lymph was now prepared; what animals were used in its preparation; and how many animals were so treated in 1928.—Mr. GREENWOOD (Minister of Health) replied: Government lymph is prepared at the Government Lymph Establishment at Hendon. My hon. friend will find a full statement of the technique and procedure on pages 15 to 17 of the Report of the Vaccination Committee, 1928. During 1928 438 calves and 38 rabbits were used in the preparation of the lymph.

MONDAY, NOV. 25TH.

Medical Experts and Seven-year Pension Cases.

Major COHEN asked the Minister of Pensions (1) whether he would give the House more information regarding the arrangements made for securing the assistance of independent advice in over seven years' cases from medical experts nominated by the Presidents of the Colleges of Physicians and Surgeons; whether the advice of the experts would be accepted and acted on by the Ministry; and whether all cases recommended, after investigation, by local war pension committees where he was not able to agree with the Ministry decision would be referred to the independent experts. (2) What was the method he intended to adopt in order to ensure that applicants for pensions outside the seven years' limit were given explicit opportunity to produce evidence; and (3) whether, in view of the fact that it was proposed to make use of the statutory powers of the local war pension committees to hear and investigate causes of complaint from dissatisfied applicants in connection with the over seven years' cases, he would take steps to ensure that the fullest possible information was placed at the disposal of the war pension committees, especially where their recommendations were not accepted by headquarters, in order that the committees might be in a position to deal with and investigate cases of complaint.—Mr. F. O. ROBERTS replied: It is not in my judgment practicable or desirable at this stage to define minutely the procedure on points which experience alone can properly determine. I may say, however, that all applicants will be expressly invited by the area offices of the Ministry to state their own cases in writing and to furnish evidence in support of them. Free use will be made of the advice of the independent medical experts alluded to in all cases where there is material conflict of evidence, including cases recommended after due investigation by war pensions committees, and the fullest weight will be given to their advice, though I am naturally unable, consistently with my own responsibility in the matter, to bind myself to accept their opinion in every case. War pensions committees will, as far as possible, be made acquainted with the grounds for rejection of any case recommended by them after investigation where they may find this information necessary in order to assist them in dealing with renewed applications.

Narcotic Drugs for Medical Purposes.

Mrs. HAMILTON asked the Home Secretary the total amount of opium and other narcotic drugs required annually for medical needs in Great Britain in accordance with the formula worked out by the Health Committee of the League of Nations; the actual amount of opium derivatives and narcotic drugs of all categories manufactured in Great Britain in the latest year for which figures were available; and the actual amount of narcotic drugs of all categories exported from Great Britain in the latest year for which figures were available.—Mr. CLYNES replied: The Health Committee of the League of Nations estimated (but with some qualifications) that in countries possessing a highly developed system of medical assistance the maximum requirements of opium and its alkaloids and derivatives for medical and scientific purposes were, in terms of raw opium with 10 per cent. morphine, 4·50 milligrammes per head per year, and of cocaine 7 milligrammes per head per year. Upon the basis of this calculation and with an estimated population of 45,625,000 the maximum requirements of Great Britain and Northern Ireland were in 1928: 45,263 lb. of raw opium and 704 lb. of cocaine. The quantities manufactured in Great Britain in 1928 of the drugs to which the Dangerous Drugs Act apply were as follows:—

Medicinal opium	6,859 lb.
Morphine and its salts	9,056 ,,*
Diacetylmorphine and its salts	675 ,,
Cocaine and its salts	308 ,,

* Including 4868 lb. used in the manufacture of derivatives of opium or morphine which are not within the Dangerous Drugs Acts.

The quantities exported in 1928 were:—

Raw opium	15,956 lb.
Medicinal opium	3,394 ,,
Morphine and its salts	3,114 ,,
Diacetylmorphine and its salts	377 ,,
Cocaine and its salts	278 ,,

Figures are not available in regard to opium derivatives which are not subject to the provisions of the Dangerous Drugs Acts.

Cocaine and Cocaine Hydrochloride.

Mr. DAY asked the Home Secretary whether he had any information as to the amount of cocaine and cocaine hydrochloride that had been manufactured in Great Britain under the authority of the Home Office during the three years ended to the last convenient date.—Mr. CLYNES replied: Since the coming into force of the Dangerous Drugs Acts no cocaine was manufactured until 1928, when 1047 oz. of cocaine and 3887 oz. of the salts of cocaine were manufactured under Home Office licence.

MILLER GENERAL HOSPITAL.—This Greenwich hospital, which was founded in 1783 as a dispensary, is in danger of being compelled to close a considerable proportion of its beds. Its debt to the bankers amounts to £40,000, no more money can be borrowed, and at least £50,000 is needed to remove existing difficulties. In the last 17 years the number of beds has increased from 22 to 169, including 18 at the seaside for children. In the same period the number of out-patients has nearly doubled, and is now close upon 200,000. The hospital serves a large portion of south-east London.

DONATIONS AND BEQUESTS.—The late Sir William Towle, of the Midland Railway Company's hotels, left, among other bequests, a sum to provide an "Elizabeth Towle Bed" at the Middlesex Hospital.—The Cancer Hospital, Fulham, has received an anonymous donation of £5000.—Mr. Theodore Pim, of Snowdenham Hall, Bramley, Surrey, stockbroker, left, among other bequests, £2000 to the Royal County Hospital, Guildford; £1000 each to the London, St. Bartholomew's, and Charing Cross Hospitals; and £500 each to the Dreadnought Seamen's Hospital; Treloar's Cripples' Home, Alton; the Royal Free Hospital; the Royal London Ophthalmic Hospital; and the Meath Hospital, Dublin.—Mr. Percy Crossman, of Great Bromley Hall, Colchester, left £1000 each to the Essex County Hospital and the London Hospital.

Medical News.

UNIVERSITY OF OXFORD.—On Nov. 23rd the following degrees were conferred:—

D.M.—G. P. Wright (in absentia).
M.Ch.—C. W. Flemming.
B.M.—J. A. Eyres.

SOCIETY OF APOTHECARIES OF LONDON.—At recent examinations the following candidates were successful:—

Surgery.—W. J. D'Rosario, Guy's Hosp.; I. F. W. Edwards, St. Mary's Hosp.; W. J. Frith, London Hosp.; B. C. Ghose, Durham; W. A. R. Mailer, St. Bart.'s Hosp.; I. W. H. Mansfield, Middlesex Hosp.; E. J. O'Loughlin, Birmingham; and S. Ramadas, St. George's Hosp.
Medicine.—R. Gilmore, Manchester; J. Gordon, St. Mary's Hosp.; M. Naylor, Sheffield; A. Scher, Basle and London Hosp.; and L. J. P. Sonomenho, Lisbon.
Forensic Medicine.—J. Britanischski, Berlin and London Hosp.; R. F. M. Child, St. Mary's Hosp.; A. Kellner, London Hosp.; E. E. Le Feuvre, St. Mary's Hosp.; M. Naylor, Sheffield; A. Scher, Basle and London Hosp.; L. J. P. Sonomenho, Lisbon; and G. W. Sturgess, St. Bart.'s Hosp.
Midwifery.—P. S. Balachandran, Middlesex Hosp.; K. C. Bhattacharyya, St. Thomas's Hosp.; A. Buch, St. Mary's Hosp.; W. J. D'Rosario, Guy's Hosp.; I. F. W. Edwards, St. Mary's Hosp.; A. D. H. Hugo, Guy's Hosp.; T. C. Keble, St. Mary's Hosp.; W. A. R. Mailer, St. Bart.'s Hosp.; C. G. Nicol, St. Mary's Hosp.; and D. Ram Annamalai, London Hosp.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: P. S. Balachandran, K. C. Bhattacharyya, R. Gilmore, and E. J. O'Loughlin.

UNIVERSITY OF DUBLIN: *Trinity College.*—At recent examinations the following candidates were successful:—

M.Ch.

J. C. Fouché and H. E. Murray.

FINAL EXAMINATION FOR M.B., B.Ch., AND B.A.O.

Medicine.—E. F. St. J. Lyburn, W. R. Johnston, Arnold Rose, Josephine M. Enright, Lilla M. Spiller, W. B. Hamilton, D. G. M'Caully, W. A. Y. Knight, F. O. Pilkington, A. J. Garde, G. F. West, Dora G. Bradley, R. P. M'Carrigle, Aaron Rakoff, R. E. Hemphill, F. M. Lyons, and F. S. Mackenna.
Surgery.—*G. B. Thrift, G. R. Beare, Kathleen A. Wilson, E. S. Tweedy, M. E. Kirwan, G. K. Graham, E. J. M. Bam, J. N. U. Russell, Frances E. Wilson, Dora G. Bradley, J. F. K. MacCarthy-Morrogh, and J. M. M'Elligott.
Midwifery.—*A. H. Thompson, *P. L. O'Neill, *Reginald Bowesman, J. M. Gibbon, Daniel Nolan, F. P. FitzGerald, Annie E. Thompson, T. H. Dockrell, H. H. G. Dorman, D. G. M'Caully, A. A. Lisney, J. T. Robinson, and Ruth R. Armstrong.

FINAL EXAMINATION FOR B. DENT. SC.

Dental Surgery and Pathology, &c.—D. D. Craig.

* Passed on High Marks.

UNIVERSITY OF LONDON.—At a meeting of the Senate on Nov. 20th Dr. G. A. Harrison was appointed as from Oct. 1st to the University Readership in Chemical Pathology tenable at St. Bartholomew's Hospital Medical College.

Dr. Harrison was educated at Oundle and Caius College, Cambridge, where he took a first-class in Part I. of the Natural Sciences Tripos in 1915. After clinical work at Ancoats Hospital, King's College Hospital, and elsewhere, he qualified in 1917, and went out to Mesopotamia, where he gained experience of tropical diseases. From 1919 to 1924 he was biochemist to King's College Hospital, after which he spent two years as biochemist to the Hospital for Sick Children, Great Ormond-street. Since 1926 he has been chemical pathologist to St. Bartholomew's Hospital. He was awarded the Raymond Horton-Smith prize on graduating as M.D. Camb. in 1925.

Sir Cooper Perry was appointed a member of the Board of Management of the London School of Hygiene and Tropical Medicine.

The Senate invites applications for the University chair of social biology tenable at the London School of Economics.

UNIVERSITY OF CAMBRIDGE.—The Raymond Horton-Smith prize given for the best M.D. thesis of the academic year, has been awarded to Mr. Wilfred Shaw for his thesis on Irregular Uterine Hæmorrhage. Mr. Shaw contributed a paper on this subject to the Spring number of the *Journal of Obstetrics and Gynæcology of the British Empire.*

ROYAL PHOTOGRAPHIC SOCIETY.—An exhibition of radiography will be held at 35, Russell-square, W.C., from Dec. 4th to Dec. 21st (10 A.M. to 5 P.M. daily except Sundays.) At 7 P.M. on Monday, Dec. 9th, Prof. W. L. Bragg, F.R.S., will give a popular lecture on X Ray Optics.

INSTRUCTION IN PSYCHOLOGICAL MEDICINE.—A programme of lectures and practical courses of instruction for a diploma in psychological medicine, beginning on Jan. 7th, 1930, has now been issued by the Maudsley Hospital, and may be had from the director of the Central Pathological Laboratory at the hospital, Denmark Hill, London, S.E. 5.

LONDON HOSPITAL MEDICAL COLLEGE.—The Liddle triennial prize for 1929-30, of the value of £120, will be awarded for an essay on the Cause and Incidence of Duodenal Ulcer. The prize is open to public competition, and the conditions of entry may be obtained from the Dean of the Medical College. Essays must be delivered at the hospital not later than May 31st.

OLD EPSOMIAN CLUB.—The annual general meeting of this club will be held at the Hotel Great Central, Marylebone, N.W., at 6.30 P.M. on Thursday, Dec. 12th, and will be followed by the annual dinner at 7.15 for 7.30. The chair will be taken by Brigadier-General G. T. Mair, and all Old Epsomians, whether members of the club or not, are invited to be present on this occasion. Attention is directed to the change of restaurant on this particular occasion.

YORKSHIRE ASSOCIATION OF GLASGOW UNIVERSITY GRADUATES.—The annual dinner of this Association will be held in the Great Northern Hotel, Leeds, at 7 P.M. on Friday, Dec. 6th. All graduates resident in Yorkshire or the surrounding areas are eligible for membership and are invited to the dinner. The guest of the evening will be Prof. J. Graham Kerr, F.R.S. Further information may be had from the hon. secretary, Dr. W. MacAdam, 40, Park-square, Leeds.

INFANTS' HOSPITAL, VINCENT-SQUARE.—Mr. Robert Mond, who has been a constant and generous benefactor to the hospital, has made a gift of £25,000 to the extension fund. The gift will be payable over the next seven years, and will bring up the total amount given or promised to the extension fund to well over £100,000.

ROYAL SURGICAL AID SOCIETY.—The sixty-seventh annual meeting of this Society will be held at the Mansion House, London, at 4 P.M. on Tuesday, Dec. 3rd, with the Lord Mayor in the chair.

HUNT MEET AT A HOSPITAL.—The South Oxfordshire hunt met recently at the Wingfield Orthopædic Hospital among the patients in the open air. The hounds are stated to have "enjoyed the novelty almost as much as the young patients."

ROYAL MEDICAL BENEVOLENT FUND.—A meeting of the Vice-Presidents was held at 10, Wimpole-street on Nov. 6th in response to invitations from Sir Thomas Barlow, who explained the position of the Fund, the financial details being added by Sir Charters Symonds. Various speakers in the room made suggestions for the increase of the regular income, and the general conclusion was that, while the work of the Fund is and had been of unspeakable value, and while its management was admirable, the objects for which it existed were insufficiently appreciated by the medical profession. Various steps were proposed to make the Fund better known.

QUEEN ALEXANDRA HOSPITAL, MILLBANK.—A new wing, consisting mainly of a spacious out-patient department, was opened on Nov. 26th by the Prince of Wales. The Prince was received by the Director-General, Lieut.-Gen. H. B. Fawcus. Certain members of the staff of the hospital were presented to the Prince: Bt. Col. Ryan, O.C. Hospital; Lieut.-Col. Garforth, Engineer Officer; Col. Purser, London Dir. A.D.M.S.; Maj.-Gen. Ensor, D.D.M.S. East. Cd.; Miss Osborne, Matron-in-Chief; Major Johnson, Registrar; Captain Baxter, Quartermaster; Miss Mackay, Matron; Col. Harrison, Col. Kennedy, and Col. De La Cour, Consultants. The civilian consulting staff presented included Mr. Victor Bonney, Mr. E. D. D. Davis, Sir T. Crisp English, Prof. E. H. Kettle, Sir Wm. Lister, Dr. H. MacCormac, Dr. A. G. Phear, Mr. S. Gilbert Scott, Sir John Thomson-Walker, and Mr. A. E. Webb Johnson. The Prince then proceeded to inspect the three floors of the new wing. This contains X ray rooms, departments for eye, ear, nose, and throat, dentistry work, and massage. At the top of the building, which is admirably designed, spacious, and light, is a well-arranged and equipped pathological laboratory. The Prince spent over half an hour in the building, and expressed himself as delighted with what he had seen. The commandant and officers of the R.A.M.C. Headquarter Mess received the visitors in the mess after the ceremony.

EXTENSION OF HARROW HOSPITAL.—This hospital is to be extended at a cost of £25,000. There will be accommodation for a further 30 patients and 15 nurses.

Dr. T. N. Kelynack, after nearly 28 years as physician to the Mount Vernon Hospital, has been appointed consulting physician and a member of the council of management.

Medical Diary.

Information to be included in this column should reach us in proper form on Tuesday, and cannot appear if it reaches us later than the first post on Wednesday morning.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

TUESDAY, Dec. 3rd.—8.30 P.M., ORTHOPÆDICS. Discussion on Minor Injuries about the Elbow-joint. Opener: Mr. W. H. Ogilvie. To be followed by Mr. Watson Jones, Mr. Jenner Verrall, and others. 8 P.M., PATHOLOGY. Meeting at the Royal Army Medical College, Millbank, S.W.

WEDNESDAY.—5 P.M., HISTORY. Sir William Hale-White: The Medical Boswells. Dr. G. C. Peachey: The Book-plates of Medical Men (with lantern slides). 8.30 P.M., SURGERY. Pathological evening.

FRIDAY.—10.30 A.M., OTOLOGY. (Cases at 9.30 A.M.) The Diagnostic Value of X Ray Examination of the Temporal Bone, and the Diagnosis of Eighth Nerve Tumours. Papers by Dr. Elsie Mann, Dr. Graham Hodgson, Mr. T. H. Just, Dr. W. T. Gardiner, Dr. T. B. Jobson, and Mr. T. B. Layton. Cases and radiograms will be shown by Mr. C. Gill-Carey, Mr. E. Watson-Williams, Dr. Imrie, and Dr. Gardiner. 5 P.M., LARYNGOLOGY. (Cases at 4 P.M.) Cases will be shown by Mr. L. G. Brown, Dr. Dan McKenzie, Sir St. Clair Thomson, Sir James Dundas-Grant, Mr. V. E. Negus, Mr. H. A. Kisch, Mr. J. D. McLaggan, Mr. Archer Ryland, and others. 8.30 P.M., ANÆSTHETICS. Discussion: Anæsthesia in Rectal Surgery. Opener: Dr. J. K. Hasler.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole-street, London, W.

MONDAY, Dec. 2nd, to SATURDAY, Dec. 7th.—MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W. Mon., 5 P.M., lecture by Mr. Harold Kisch: Aches and Pains in the Throat. No fee. Tues., 8.30 P.M., M.R.C.P. lecture by Dr. Kinnier Wilson: "Fits"; Varieties; Pathogenesis; Relation to Narcolepsy, Catalepsy, Syncope, &c. Fri., 8.30 P.M., at 10, Bedford-square, W.C., M.R.C.P. lecture-demonstration by Dr. Knyvett Gordon: Diagnosis of Bacterial Infection (illustrated by the epidiascope, followed by a laboratory demonstration).—HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale. Thurs., 2 P.M., demonstration by Dr. Russell Brain. No fee.—ROYAL FREE HOSPITAL, Gray's Inn-road, W.C. Fri., 4 P.M., lecture-demonstration by Mr. C. A. Joll: The Early and Late Results of Operations for Exophthalmic Goitre. No fee.—LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W. Practitioner's Course, 4 to 5.45 P.M.—HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars-road, S.E., and THE INFANTS HOSPITAL, Vincent-square, S.W. Afternoon courses for two weeks. Further particulars from the Fellowship of Medicine.

UNIVERSITY OF LONDON.

THURSDAY, Dec. 5th.—5 P.M. (in the Lecture Hall of the Royal Society of Medicine), Dr. Harris P. Mosher (Harvard): The Lower End of the Œsophagus at Birth and in the Adult. (The Semon Lecture.)

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE.

MONDAY, Dec. 2nd.—5 P.M., Mr. J. C. Dawes, M.I.Mech.E.: Disposal of Refuse.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY, Dec. 2nd.—2.30 to 5 P.M.: Medical, Surgical, and Gynæcological Clinics. Operations.

TUESDAY.—2.30 to 5 P.M.: Medical, Surgical, Ear, Nose and Throat Clinics. Operations.

WEDNESDAY.—2.30 to 5 P.M.: Medical, Skin, and Eye Clinics. Operations.

THURSDAY.—11.30 A.M.: Dental Clinics. 2.30 to 5 P.M.: Medical, Surgical, Nose, Throat and Ear Clinics. Operations.

FRIDAY.—10.30 A.M.: Throat, Nose and Ear Clinics. 2.30 to 5 P.M.: Surgical, Medical, and Children's Diseases Clinics. Operations. 4.30 P.M.: Demonstration on Practical Neurology by Dr. L. R. Yealland.

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE, Hammersmith, W.

MONDAY, Dec. 2nd.—10 A.M., Dr. Dowling: Skin Department. 11 A.M., Mr. Tyrrell Gray: Surgical Wards. 2 P.M., Mr. Sinclair: Surgical Wards.

TUESDAY.—10 A.M., Medical Registrar: Medical Wards. 2 P.M., Dr. Shaw, Medical Out-patients. 2.30 P.M., Sir Henry Simson: Gynæcological Operations.

WEDNESDAY.—10 A.M., Dr. Burnford: Medical Wards. 2.30 P.M., Mr. Donald Armour: Surgical Wards. Dr. Scott Pinchin: Medical Out-patients.

THURSDAY.—11.30 A.M., Mr. Simmonds: Demonstration of Fractures. 2 P.M., Mr. Bishop Harman: Eye Department. 2 P.M., Mr. MacDonald: Genito-Urinary Department.

FRIDAY.—10 A.M., Dr. Pritchard: Medical Wards. 12 noon, Dr. Shaw: Clinical Demonstration. 2 P.M., Mr. Vlasto: Throat, Nose and Ear Department.

SATURDAY.—9 A.M., Mr. Vlasto: Throat, Nose and Ear Operations. 9.30 A.M., Dr. Burnford: Bacterial Therapy Department. 10 A.M., Dr. Owen: Medical Children's Department.

Daily, 10 A.M. to 5 P.M., Medical, Surgical and Special Out-patients, Operations, Ward Visits, Anæsthetic Courses.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL, Denmark Hill, S.E.

THURSDAY, Dec. 5th.—9 P.M., Mr. C. P. Wakeley: Diseases of the Breast and Their Treatment.

LONDON SCHOOL OF DERMATOLOGY, St. John's Hospital, 49, Leicester-square, W.C.

TUESDAY, Dec. 3rd.—5 P.M., Dr. A. C. Roxburgh: Cutaneous Syphilis (1).

THURSDAY.—5 P.M., Cutaneous Syphilis (2).

ROYAL NORTHERN HOSPITAL, Holloway-road, N.
(Intensive Week.)

MONDAY, Dec. 2nd.—2.15 P.M., Mr. Kenneth M. Walker: Urinary Calculi. 3.15 P.M., Mr. A. M. Zamora: Some Points About Mastoid Infection.

TUESDAY.—2.15 P.M., Mr. T. T. Higgins: Use of Sodium Morrhuate in the Injection Treatment of Varicose Veins. 3.15 P.M., Dr. A. Lisle Punch: Bronchiectasis.

WEDNESDAY.—2.15 P.M., Dr. Bernard E. Schlesinger: Ward Demonstration of Cases. 3.15 P.M., Dr. H. C. Semon: The Problem of the Trade Dermatoses in General Practice.

THURSDAY.—2.15 P.M., Mr. Frederick Roques: Some Modern Obstetric Methods. 3.15 P.M., Mr. E. Wolff: Headache.

FRIDAY.—2.15 P.M., Dr. Bruce Williamson: The Arrhythmias in General Practice. 3.15 P.M., Dr. C. Gouldesbrough: Osteo-arthritis.

TUESDAY.—3.15 P.M., Dr. P. O. Ellison: Investigation of Disease.

SOUTH-WEST LONDON POST-GRADUATE SOCIETY, St. James's Hospital, Ouseley-road, Balham, S.W.

TUESDAY, Dec. 3rd.—4 P.M., Mr. L. E. Phillips: Disorders of the Menopause.

CHADWICK PUBLIC LECTURES.

TUESDAY, Dec. 3rd.—8.15 P.M. (in the Inner Temple Hall-entrance from Strand and Fleet-street), Mr. W. A. Robson, Barrister-at-Law: Public Health Law and Administration.

PEOPLE'S LEAGUE OF HEALTH, 12, Stratford-place, W.

FRIDAY, Dec. 6th.—6 P.M. (at the Medical Society of London, 11, Chandos-street, W.), Sir Thomas Oliver: The Mechanised Age of To-day and its Probable Effect on the Human Race.

BRITISH INSTITUTE OF RADIOLOGY.

WEDNESDAY, Dec. 4th.—2.30 P.M. (in the Central Hall, Westminster), official opening of the Exhibition and Annual Meeting by the Rt. Hon. Arthur Greenwood, the Minister of Health. 3.15 P.M., Prof. G. Forssell: Radiotherapy of Malignant Tumours in Sweden. (Mackenzie Davidson Memorial Lecture.)

THURSDAY.—6 P.M., Prof. A. S. Eddington: X Rays in the Stars. (Silvanus Thompson Memorial Lecture.)

ROYAL INSTITUTE OF PUBLIC HEALTH, 37, Russell-square, W.C.

WEDNESDAY, Dec. 4th.—4 P.M., Dr. A. C. Jordan: Dress in Relation to Health and Disease.

ANCOATS HOSPITAL, Mill-street, Manchester.

THURSDAY, Dec. 5th.—4.15 P.M., Dr. G. J. Langley: The Treatment of Empyema.

MANCHESTER ROYAL INFIRMARY POST-GRADUATE COURSE.

TUESDAY, Dec. 3rd.—4.15 P.M., Dr. Crighton Bramwell: Coronary Thrombosis.

FRIDAY.—4.15 P.M., Dr. H. Dove Cormac: Some Common Forms of Mental Disorder.

UNIVERSITY OF SHEFFIELD POST-GRADUATE CLINICS.

TUESDAY, Dec. 3rd.—8.45 P.M. (in the Physics Lecture Room), Dr. Maurice Davidson: Intrathoracic and Pulmonary New Growths (preceded by an exhibition of pathological specimens). (Cancer Lecture.)

FRIDAY.—3.30 P.M., Mr. Ferguson Wilson: Surgical Cases.

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION.

WEDNESDAY, Dec. 4th.—4.15 P.M. (in the Ear, Nose and Throat Hospital). Ear, Nose and Throat Cases by the Staff.

Appointments.

ELLISON, DOROTHY, M.B., Ch.B. Edin., has been appointed Junior Resident Medical Officer, Worcester Infirmary.

ROSS, A. T., M.D., Ch.B. Glasg., Certifying Surgeon under the Factory and Workshop Acts for the Mevagissey District of Cornwall.

SHARMAN, A., M.B., Ch.B. Glasg., Surgical Research Officer, Royal Samaritan Hospital for Women, Glasgow.

SNELL, W. E., B.Sc. Lond., L.R.C.P. Lond., M.R.C.S., Tuberculosis Officer, Royal Northern Hospital Dispensary.

Stafford General Infirmary:—CAMPBELL, A. V., M.D. Liverp., D.P.H., and GILL, A. W., M.D. Edin., Hon. Visiting Physicians.

Vacancies.

For further information refer to the advertisement columns.

All Saints' Hospital, 91, Finchley-road, N.W.—Hon. Radiologist. Hon. Surg. Reg. Also Two H.S.'s. Each at rate of £150.

Barnstaple, North Devon Hospital.—H.S. At rate of £150.

Birmingham, Queen's Hospital.—Res. H.S. to Ophth. and Ear, Nose and Throat Dept. Res. H.S. to Cas. Dept. Each £70. Jun. R.M.O. £100. Also Res. Anæs. £70–£100.

Blackburn County Borough.—Asst. M.O.H., &c. £600.

Brighton, Royal Alexandra Hospital for Sick Children.—H.P. £100.

Bristol Royal Infirmary.—H.S. to Ear, Nose and Throat Dept.

Buxton, Devonshire Hospital.—Asst. H.P. At rate of £150.

Cairo, Egyptian University, Faculty of Medicine.—Two Surgical Tutors. £E35 monthly.

Cancer Hospital (Free), Fulham-road, S.W.—H.S. At rate of £100.

Central London Throat, Nose and Ear Hospital, Gray's Inn-road, W.C.—Hon. First Assists. for Out-patient Dept.

Charing Cross Hospital.—Surg. Reg. £150.

City of London Hospital for Diseases of the Heart and Lungs, Victoria Park, E.—Res. M.O. £250. Also H.P. At rate of £100.

Colonial Medical Service.—M.O.'S. East Africa, £600. Malaya, $500 per month.

Dewsbury and District General Infirmary.—H.S. £200.

Dreadnought Hospital, Greenwich.—H.P. and H.S. At rate of £110. Also Med. Supt. £300.

Dudley Guest Hospital and Eye Infirmary.—Asst. H.S. £150.

East Ham Memorial Hospital, Shrewsbury-road, E.—H.P. and Cas. O. At rate of £150.

Exeter, Royal Devon and Exeter Hospital.—Sen. H.S. £250.

Freemasons Hospital and Nursing Home, 237, Fulham-road, Chelsea, S.W.—Res. M.O. At rate of £250. Also Phys. for Electro-Therapeutic Dept.

Great Yarmouth County Borough.—Asst. M.O.H., &c. £600.

General Lying-in Hospital, York-road, Lambeth, S.E.—Res. M.O. At rate of £100.

Grosvenor Hospital for Women, Vincent-square, S.W.—Hon. Anæsthetist. Also Res. M.O. At rate of £100.

Hampshire County Council.—Asst. County M.O. £600.

Hampstead General and North-West London Hospital, Haverstock Hill, N.W.—H.S. Also H.P. Each at rate of £100.

Harrogate Infirmary.—Sen. and Jun. H.S.'s. At rate of £150 and £100 respectively.

Hertford County Council.—Asst. M.O.H. for Maternity and Child Welfare Services. £600.

Hertford County Hospital.—Hon. Radiologist. Also Hon. Pathologist.

Hospital for Sick Children, Great Ormond-street, W.C.—H.S. and H.P. Each at rate of £100. Also Part-time Jun. Cas. O. At rate of £150.

Huddersfield County Borough.—Asst. M.O.H. £500.

Institute of Ray Therapy, 152, Camden-road, N.W.—Jun. M.O. At rate of £150.

Italian Hospital, Queen-square, W.C.—Two Hon. Surg.

Leeds City.—Chief Asst. M.O.H. £900.

Liverpool Hahnemann Hospital.—H.S. At rate of £100. Also Hon. Path. £25.

Liverpool Sanatorium, Delamere Forest, Frodsham.—Asst. Med. Supt. £250.

London Hospital, E.—Cardiographic Dept.—Paterson Research Scholar. £400.

London Lock Hospital, Dean-street and Harrow-road, W.—Second Anæsthetist. 1 guinea each attendance.

London Skin Hospital, Fitzroy-square, W.—Hon. Physician and Hon. Pathologist.

London University.—Geoffrey Duveen Travelling Studentship. £450.

Manchester Ancoats Hospital.—H.S. £100. Asst. M.O. for V.D. Clinics. 1 guinea per attendance. Asst. Pathologist. Also Med. Reg. and Surg. Reg. Each £100.

Manchester, Baguley Sanatorium.—Sen. Asst. M.O. £500.

Manchester Northern Hospital for Women and Children, Cheetham Hill-road.—Sen. H.S. Also Jun. H.S. £130 and £100 respectively.

Manchester Royal Infirmary.—Res. M.O. £200. Asst. Res. Surg. O. At rate of £150. Asst. Surg. O. for Gynæcological Dept. £35. Also Asst. Surg. O. for Central Branch. £75.

Manchester, Salford Royal Hospital.—Res. Surg. O. £200. Also Two Res. H.S.'s to Special Depts. Each at rate of £125.

Metropolitan Hospital, Kingsland-road, E.—Asst. S. Also Two Anæsthetists.

Ministry of Health.—Five M.O.'s. Each £887.

Newark Hospital and Dispensary.—Res. H.S. At rate of £150.

Nuneaton Borough.—Asst. M.O.H. £600.

Plaistow Fever Hospital, E.—Jun. Asst. M.O. At rate of £300.

Poplar Hospital for Accidents, Poplar, E.—Hon. Visiting Surgeon.

Preston, Biddulph Grange Orthopædic Hospital.—Jun. H.S. At rate of £150.

Prince of Wales's General Hospital, Tottenham, N.—Hon. Clin. Assts.

Queen Mary's Hospital for the East End, Stratford, E.—Res. M.O. £200. H.P. and Cas. O. £150. Also Three H.S.'s, and One H.P. Each £120.

Radium Institute, Riding House-street, W.—H.S. £150.

St. Bartholomew's Hospital, E.C.—Physician.

St. Peter's Hospital for Stone, Henrietta-street, Covent Garden, W.C.—Clin. Assts.

Salisbury General Infirmary.—Two H.S.'s.

Sheffield Royal Infirmary.—Clin. Asst. to Medical Depts. £300.

Southport General Infirmary.—Jun. H.S. £100.

South Shields, Ingham Infirmary.—Sen. and Jun. H.S.'s £200 and £150 respectively.

Sutton, Surrey, Downs Hospital.—Jun. Asst. M.O. £500.

Tilbury Hospital, Essex.—Med. Supt. £250. Also H.S. At rate of £150.

Torquay, Torbay Hospital.—H.P. £175.

Western Australia, Lunacy Department.—Jun. Asst. Res. M.O. £456.

West London Hospital, Hammersmith-road, W.—H.P., H.S. Aural and Ophth. H.S. and Asst. Cas. O. Each at rate of £100.

Westminster Hospital, Broad Sanctuary, S.W.—Asst. Pathologist. £250.

Wigan Infirmary.—Third H.S. £150.

Willesden General Hospital N.W.—Clin. Asst. for Surgical Out-Patient Session.

Wills County Council.—Asst. M.O.H. and Asst. School Med. Inspector. £600.

York County Hospital.—Hon. M.O. for Massage and Electro-Therapeutic Dept.

The Chief Inspector of Factories announces a vacancy for a Certifying Factory Surgeon at King's Cliffe (Northants).

Births, Marriages, and Deaths.

BIRTHS.

BLACKER.—On Nov. 19th, at The Châlet, Esher, the wife of Carlos Paten Blacker, M.C., M.A., M.R.C.P., of a son.

JACKSON.—On Nov. 21st, at Mount Jocelyn, Crediton, Devon, the wife of L. N. Jackson, M.D., of a daughter.

RICHES.—On Nov. 19th, at 4, Walton House, Longford-street, Regent's Park, the wife of E. W. Riches, M.C., M.S., F.R.C.S., of a daughter.

SCOTT.—On Nov. 21st, at Stagsden, Bournemouth, the wife of Dr. Maitland Scott, of a son.

MARRIAGES.

ADAM—LLOYD.—On Nov. 16th, in London, Major Walter Eustace Adam, M.C., R.A.M.C., to Phyllis Joan, elder daughter of the late Captain Walter Lloyd, Royal Welsh Fusiliers, and of Mrs. Lloyd, Queen Anne's-mansions, St. James' Park, S.W.

BRUCE—MYERS.—On Nov. 19th, at St. John the Baptist's, Chester, George Bruce, M.A., M.B., C.M., Fairford, Cults, Aberdeen, to Frieda Elizabeth, younger daughter of the late Rev. Arthur Myers, M.A., and of Mrs. Myers, The Cottage, Melbourne, Derby.

WARD—NICHOLS.—On Nov. 14th, at Westminster Cathedral, Dr. Howard Ward, of Southampton, to Elsie, third daughter of the late Arthur and Mary Nichols, of Melbourne, Australia.

DEATHS.

GRAY.—On Nov. 19th, at "Little Haven," Ealing, of heart failure, John Alfred Gray, M.B. Lond., in his 72nd year.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Comments, and Abstracts.

NATIONAL BABY WEEK COUNCIL.

SOME CRITICAL ISSUES DISCUSSED.

AT a meeting of the Council held at Carnegie House on Nov. 20th, under the presidency of Mr. E. B. Turner, discussions on "A National Maternity Service" were based on issues arising out of the report of the Departmental Committee and the memorandum of the British Medical Association. Dr. T. Eustace Hill did not agree with the Association that the need for antenatal clinics would be reduced by the introduction of a satisfactory maternity service; if the clinics were suitably situated and equipped, and staffed by women medical officers, the demand would increase as the mothers became better informed. Miss E. M. Doubleday was of opinion that these clinics would tend to be rather in the nature of consultant centres, while Dr. J. W. Bone considered their principal function should be that of sorting patients into groups, and advising the women on such matters as general health and mothercraft. Dr. Hill and Miss Doubleday were in accord in believing that the Association's financial estimate of the scheme was far too low, and in the opinion that if a midwife was to be limited to about 100 cases a year a fee of £2 10*s.* a case would not provide an adequate income to attract the best type of woman. The first of the basic principles of the memorandum—"that the normal case can be safely treated at home"—was accepted by Dr. Bone and Miss Doubleday, but not by Dr. Hill, who felt there were many normal cases which required institutional treatment; he made light of the possible danger to the patients by aggregation in maternity institutions if these are "suitable so far as accommodation and staff are concerned."

Opinion was divided in regard to the proposal by the Departmental Committee to transfer the duties of inspection and the laying down of the training curriculum for midwives from the Central Midwives Board to the Ministry of Health. As a member of that committee, who had heard and read all the evidence, Dr. Hill said it had been made clear that inspection by the C.M.B. had been inadequate and perfunctory, while he himself had frequently been impressed by a tendency on the part of the Board in penal cases to show leniency which was not justified by the evidence laid before it by the local supervising authority. The C.M.B. as constituted was, he said, in no sense representative of midwives, and he was satisfied that not one per cent. of women would be deterred from entering the service because it was proposed to transfer certain minor duties to the Ministry of Health. Miss Doubleday, representing a group of midwives, agreed that the constitution of the C.M.B. needed amendment in order to make it more representative of the midwives of the country. They felt, however, that no profession could be controlled by a Government department and remain a profession, and that they ought to be governed, as the medical and nursing professions were, by an independent body. The vital point was that midwives should be supervised by people with a long practical experience of midwifery, and it was open to question whether a Government department could keep up to date in its knowledge of the professional side. The Departmental Committee's proposal amounted, it seemed, to leaving only the penal work in the hands of the Board.

THE FUTURE OF GREATER LONDON.

On Nov. 26th Mr. Arthur Greenwood, Minister of Health, accompanied by Earl Russell, Parliamentary Secretary of the Ministry of Transport, received a deputation from the Greater London Regional Planning Committee, under the chairmanship of Sir Banister Fletcher, P.R.I.B.A.

The first object of the deputation was to ask that the Government would take steps to check the evils of ribbon development on arterial roads, and it was suggested that these evils might be lessened by the following means: (1) purchase of the frontage lands by the State or the highway authority; (2) suitable agreements with the owners; (3) control of the lands adjacent to the road through town-planning schemes. A further question with which the committee had been concerned—the reservation of land for recreation grounds and other open spaces—was closely connected with that of ribbon development, since much the same difficulties arise with regard to the control over the land in question.

The committee were of opinion that these difficulties might be largely solved by amendments in the Town-planning Act, and they submitted a memorandum on the possibility of reserving a green belt around London, together with some specific suggestions for the amendment of the Town-planning Act, calculated to facilitate the reservation of land from buildings and the provision of open spaces, without imposing heavy burdens on the ratepayers. It was further suggested that additional town-planning powers should be given to county councils, which should be the authorities to acquire and hold regional open spaces, and that a body should be constituted for the Greater London area with power to prepare a master plan and scheme. This scheme should not, however, be carried beyond a provisional stage until those of the various town-planning authorities within the area were complete.

The Minister of Health said, in reply, that he was in full agreement with the general objects which the committee had set before themselves. The proposals for the reservation of open spaces and, in particular, of a green belt around London, were of great interest, though the methods to be adopted in practice would need careful examination. He was also interested in the suggestion that a special regional planning body should be constituted for the Greater London area, but he thought that local authorities would have to be consulted about this.

Lord Russell said that he fully sympathised with the views which the deputation had expressed upon the undesirability of ribbon development, from considerations both of economy and of traffic requirements. He could assure the deputation that the committee would have every support from the Minister of Transport in any practical scheme for mitigating the evil.

THE BUSCH OPTOMETER.

AT a meeting of the Optical Society, held at the Imperial College of Science and Technology, South Kensington, on Nov. 14th, Mr. A. G. Frewin, of the Emil Busch Optical Co., gave a demonstration of the Busch optometer, an instrument designed by Prof. Thorner for measuring refractive errors. By its means can be measured in diopters the hypermetropia or myopia of a symmetrical eye, or the ametropia in the two meridians of an astigmatic eye together with the directions of the meridians. The patient looks with one eye into the exit pupil of the instrument, while the observer looks into the eyepiece and focuses on the patient's macula the image of the straight filament of a small electric bulb. The focusing hand moves a scale relatively to a fixed pointer; when the side edges of the filament are sharp the ametropia may be read off at once. Freedom from glare and corneal reflections is secured by semi-circular stops which ensure that the illuminating rays are incident on the top half of the patient's cornea, whilst the light reflected from the fundus and reaching the observer issues from the lower half of the cornea. The vertex of the correcting lens is placed 12 mm. in front of the patient's cornea.

GLAXO MALTED FOOD.

IN recent articles upon the London Medical Exhibition we referred to a preparation supplied from the Glaxo Laboratories (56, Osnaburgh-street, London, N.W.) as Glaxo Malted Milk. It has been pointed out to us by the proprietors that the right name is Glaxo Malted Food, a cereal product for use as a supplementary when infants require something more than a milk diet. The preparation consists of malted barley and wheat flour, freed from bitter taste.

A HOSPITAL FORMULARY.

THE official formulary of eight Belfast hospitals has been printed and issued by the North Irish Pharmacists' Association of Belfast. It has been compiled with the consent and assistance of the medical staffs of the hospitals attached to the Belfast Medical School, and includes the prescriptions which are in common use in the out-patient departments and wards of the various hospitals. The formulary is divided into six sections beginning with general prescriptions and going on to those suitable for children, for gynæcological, throat, eye, and skin cases. Appended is a price list drawn up as a guide for hospital patients, the price of prescriptions (not including container) varying from 4*d.* to a maximum of 2*s.* 2*d.* In the addendum is a list of formulæ considered suitable alternatives to the more expensive preparations. The price of the Belfast Hospitals' Pharmacopœia is 2*s.* (plus postage), and copies may be had from any of the hospitals. Many old members of the medical school may desire to possess a copy.

DIFFUSION ANÆSTHESIA OF THE PERITONEAL CAVITY.

UNDER this heading we published last week a paragraph from our Vienna correspondent describing Dr. Mandel's experiments with percain as an abdominal anæsthetic. The Clayton Aniline Company, who supply this drug, inform us that the doses mentioned were too large. The amounted inserted in the peritoneal cavity should read "350 c.cm. of a ½ per 1000, and in later cases 250 c.cm. of a ½ per 1000, solution of percain."